



U.S. Department
of Transportation

**Federal Transit
Administration**

CIRCULAR

FTA C 5200.1A

December 5, 2002

Subject: FULL FUNDING GRANT AGREEMENTS GUIDANCE

1. **PURPOSE.** This circular provides guidance and information on developing Full Funding Grant Agreements (FFGAs) and administering funds for major capital investment (“new starts”) projects pursuant to these agreements. FFGAs are authorized under Federal transit law and are the designated means for providing new starts funds to projects with a Federal share of \$25 million or more. An FFGA establishes the terms and conditions for Federal financial participation in a new starts project; defines the project; sets the maximum amount of Federal new starts funding for a project; covers the period of time for completion of the project; and facilitates efficient management of the project in accordance with applicable Federal statutes, regulations, and policy. Within the limits of law, an FFGA provides assurance and predictability of Federal financial support for a new starts project while strictly limiting the amount of that Federal financial support.
2. **CANCELLATION.** This circular cancels FTA Circular 5200.1, “Full Funding Grant Agreements Guidance,” dated 7-2-93.
3. **REFERENCES.** [Note: in typing the address into a website, one should not type the brackets.]
 - a. Federal Transit Administration enabling statutes codified at 49 U.S.C. Chapter 53. 49 U.S.C. Chapter 53 may be viewed at [<http://www.fta.dot.gov/library/legal/usc.htm>] on FTA’s website.
 - b. Federal-aid highway and surface transportation laws, Title 23, United States Code. See [<http://www.fhwa.dot.gov/legregs/directives/cfr23toc.htm>].
 - c. Transportation Equity Act for the 21st Century (TEA-21), Pub. L. 105-178; 112 Stat. 107, June 9, 1998, as amended by the TEA-21 Restoration Act, Pub. L. No. 105-206, June 22, 1998. TEA-21 may be viewed at [<http://www.fhwa.dot.gov/tea21>]. See Title III, Federal Transit Administration Programs.
 - d. Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), Pub. L. 102-240; 105 Stat. 1914, Dec. 18, 1991.
 - e. Section 4(f) of the Department of Transportation Act of 1966, as amended, 49 U.S.C. § 303. See [<http://www.access.gpo.gov/uscode/uscmmain.html>]. Select Title 49, Subtitle I, Chapter 3, Subchapter I, Sec. 303.

- f. National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321 *et seq.* See [<http://ceq.eh.doe.gov/nepa/regs/nepa/nepaeqia.htm>].
- g. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. See [<http://www.fhwa.dot.gov/realestate/act.htm>].
- h. U.S. Department of Transportation (DOT) regulations, “Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments,” 49 C.F.R. Part 18. See [http://www.access.gpo.gov/nara/cfr/waisidx_02/49cfr18_02.html].
- i. FTA regulation, “Major Capital Investment Projects,” 49 C.F.R. Part 611. See [<http://www.fta.dot.gov/library/legal/fr12700.html>] [or pdf].
- j. FTA regulation, “Project Management Oversight,” 49 C.F.R. Part 633. See [http://www.access.gpo.gov/nara/cfr/waisidx_00/49cfr633_00.html].
- k. Joint FTA/Federal Highway Administration (FHWA) regulations, “Planning Assistance and Standards,” 23 C.F.R. Part 450 and 49 C.F.R. Part 613 (specifically, Subpart B, “Statewide Transportation Planning,” and Subpart C, “Metropolitan Transportation Planning and Programming”). See [<http://www.fhwa.dot.gov/legregs/directives/fapg/Cfr450c.htm>], and select Subparts B and C.
- l. Joint FTA/FHWA regulations, “Environmental Impact and Related Procedures,” 23 C.F.R. Part 771 and 49 C.F.R. Part 622. A summary of the environmental review process is on FTA’s website at [<http://www.fta.dot.gov/office/planning/ep/index>].
- m. U.S. DOT regulation, “Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally Assisted Programs,” 49 C.F.R. Part 24. See [<http://www.fta.dot.gov/office/program/re.htm>].
- n. U.S. Department of Labor guidelines, “DOL Guidelines, Section 5333(b), Federal Transit Law,” 29 C.F.R. Part 215. See [http://www.access.gpo.gov/nara/cfr/waisidx_98/29cfr215_98.html].
- o. Office of Management and Budget Circular A-87, “Cost Principles for State, Local, and Indian Tribal Governments,” dated 5-17-95. See [<http://www.whitehouse.gov/omb/circulars/a087/a087-all.html>].
- p. FTA Circular 4220.1D, “Third Party Contracting Requirements,” dated 4-15-96, and Change 1, which may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/tpcr.html>] and [<http://www.fta.dot.gov/library/policy/tpcrpc.htm>], respectively.
- q. FTA Circular 5010.1C, “Grant Management Guidelines,” dated 10-1-98, which may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/5010.1C/cover.htm>].

- r. FTA Circular 9030.1C, “Urbanized Area Formula Program: Grant Application Instructions,” dated 10-1-98, which may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/9030.1C/facesheet.htm>].
- s. FTA Circular 9300.1A, “Capital Program: Grant Application Instructions,” dated 10-1-98, which may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/9300.1A/facesheet.htm>].
- t. FTA Master Agreement, FTA MA(9), dated 10-1-02, which is updated annually and may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/legal/agree.htm>].
- u. FTA Notice, “Fiscal Year 2003 Annual List of Certifications and Assurances for Federal Transit Administration Grants and Cooperative Agreements,” which is updated annually and may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/legal/ca.htm>].
- v. FTA *Federal Register* Notice, “FTA Fiscal Year 2002 Apportionments, Allocations and Program Information,” (67 *Fed. Reg.*, 126 (January 2, 2002)). Apportionments are published annually. The Notice may be viewed at [<http://www.fta.dot.gov/library/legal/federalregister/2002/fr1202a.html>] and at [<http://www.fta.dot.gov/library/legal/federalregister/2002/fr1202a.pdf>].
- w. FTA Guidance containing several New Starts-related documents may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/ns/ns.htm>].
- x. FTA Report, “Annual Report on New Starts: Proposed Allocations of Funds for Fiscal Year 2003,” which is issued annually and may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/policy/ns/ns2003/nscover.html>].
- y. FTA Report, “Supplemental Report on New Starts,” which is issued annually, may be viewed at [<http://www.fta.dot.gov/library/policy/ns/annreports.htm>].
- z. FTA Guidance, “Guidance for Transit Financial Plans,” dated June 2000, which may be viewed on FTA’s website at [<http://www.fta.dot.gov/office/planning/gftfp/>].
- aa. FTA Guidance, “Reporting Instructions for the Section 5309 New Starts Criteria,” dated July 2001. See [<http://www.fta.dot.gov/library/policy/ns/2001/index.html>].
- bb. FTA Guidance, “Interim Guidance on Design-Build” (September 20, 2000), which may be viewed on FTA’s website at [www.fta.dot.gov/office/public/c0015.html].
- cc. FTA Guidance, “Quality Assurance and Quality Control Guidelines” (March 1992; under revision), which may be obtained from FTA Regional Offices.
- dd. FTA Guidance, “Project and Construction Management Guidelines, 1996 Update,” which may be viewed on FTA’s website at [<http://www.fta.dot.gov/library/program/construction/>].

ee. FTA Guidance, “Value Engineering Process Overview,” January 1988.

4. IMPACT ON DELEGATIONS OF AUTHORITY. This circular entails no delegations of authority.
5. APPLICABILITY. The FTA Full Funding Grant Agreement (FFGA) is the means mandated by statute for providing Federal financial assistance under 49 U.S.C. Section 5309 in the amount of \$25 million or more for a major capital investment (new starts) project. In the Federal Transit Administrator’s discretion, the FFGA may also be used for providing Federal financial assistance to other types of major projects.
6. DEFINITIONS. Terminology particular to this circular is capitalized in the text and defined in Appendices A (Acronyms and Definitions) and B (Model Full Funding Grant Agreement).
7. OVERVIEW OF A FULL FUNDING GRANT AGREEMENT. The FTA Full Funding Grant Agreement (FFGA) is a special type of grant agreement FTA uses for making a major investment in a new fixed guideway system—rapid rail, light rail, commuter rail, exclusive bus/high occupancy vehicle lanes, or ferry service—or an extension to an existing fixed guideway system. In exchange for FTA’s commitment to provide \$25 million or more in Federal funds under the 49 U.S.C. Section 5309 major capital investment program, over a multi-year construction schedule, the grantee commits to complete its new starts project on time, within budget, and in compliance with all applicable Federal requirements, and to bear any cost increases that might occur subsequent to award and execution of an FFGA.

The FFGA has proven a useful tool for the Federal Transit Administration in managing the entire set of new starts projects for which Federal financial assistance is sought. It enables the FTA to contractually commit the “full” amount of Federal assistance that will be available to any one project, in balance with the total amounts of Federal new starts funding available at that time for all such large-scale projects across the United States, both during the current FTA authorization and beyond. Moreover, an FFGA benefits both parties to the agreement in that it defines the project scope, establishes a firm date for project completion, provides a mechanism for designating funds for future years, leads to the development of accurate cost estimates, and permits the use of state and local funding for early project activities without jeopardizing future Federal funding for those activities.

An FFGA is composed of both text and attachments. The text of an FFGA is a set of standardized contractual terms and conditions applicable to all new starts projects, including definitions, obligations of completion and local share, cost eligibility, project management oversight, and labor protection. The attachments to an FFGA are tailored to each specific project. The attachments address the scope of work, project description, baseline cost estimate, baseline construction schedule, prior grants and related documents for the project, schedule of Federal funds, environmental mitigation, studies to measure the project’s success after it has opened to revenue service, and any special conditions applicable to the project.

8. CONTENTS OF THIS CIRCULAR. Chapter I traces FTA's historical use of FFGAs; notes the Congressional adoption and revision of FFGA policy through the enactment of FTA's most recent authorizing statutes, ISTEA and TEA-21; outlines FTA's major capital investments rule and annual report to the Congress that contains recommendations on the allocation of new starts funding for the coming fiscal year; summarizes FTA's standards for project readiness as prerequisite to the execution of an FFGA; and addresses the 60-day notice that must be given to Congressional authorization and appropriations committees before FTA may enter into an FFGA.

Chapter II summarizes the development of a new starts project and the requirements and timing of an application for an FFGA, and addresses several analyses and documents that are prerequisite to the execution of an FFGA. Specifically addressed are the environmental and historic preservation studies, project management plan, quality control and quality assurance plans, rail and bus fleet management plans, financing plan for both capital and operation and maintenance costs, value engineering, and safety and security management. The reader is directed to FTA documents concerning new starts projects on the FTA website at [<http://www.fta.dot.gov>]. Select "New Starts," then select "Guidance Documents."

Chapter III addresses both the standardized terms and conditions that constitute the text of an FFGA and the several attachments to an FFGA. Chapter IV describes the procedure by which an FFGA and a project budget are recorded in FTA's electronic award and management system, TEAM-Web. Chapter V speaks to the administration of a project in construction under an FFGA, discussing the procedure by which a grantee may request modification of an FFGA, notice requirements, FTA's project management oversight, third party contracting, and the administration of project property.

There are four appendices to this circular. Appendix A lists acronyms and provides definitions of selected terms used in an FFGA and in FTA's programs. Appendix B sets forth a model FFGA and provides examples of Attachments 1 through 8 to an FFGA. The Attachments to the model FFGA are illustrations only; they are premised on a hypothetical light rail project, and they have been created to display some of the more common features of Attachments that have accompanied previous FFGAs. Appendix C consists of a checklist of documents required to be included in or accompany the Application for an FFGA. Appendix D presents an example of the use of the cost and award terms in an FFGA.

To the extent permitted by law, the FTA Administrator reserves the right to waive any provision of this circular.



Jennifer L. Dorn
Administrator

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CHAPTER I

FULL FUNDING GRANT AGREEMENT: STATUTORY AND REGULATORY BACKGROUND

1. HISTORICAL USE OF FULL FUNDING GRANT AGREEMENTS. Since the early 1970s, the Federal government has provided a large share of the Nation's capital investment in urban mass transportation, particularly for "new starts" projects, that is, major new fixed guideway systems or extensions to existing fixed guideway systems. Always, however, the demand for Federal new starts funding has exceeded supply. By the late 1970s, FTA's predecessor agency, the Urban Mass Transportation Administration (UMTA), recognized the need to adopt policies to ensure that the available Federal funds would be used in the most prudent and effective manner. Moreover, UMTA recognized the need to limit the total Federal participation in any one project to maximize the availability of funding for other eligible projects. Thus, UMTA developed the device of a Full Funding Grant Agreement (FFGA), a special form of contractual obligation between the Federal government and a transit agency. An FFGA limits the amount of Federal new starts funds available for any one project, in balance with the total amount of new starts funds available at that time for all such projects throughout the United States.

As UMTA gained experience in the use of FFGAs, the agreements became more sophisticated. UMTA began setting terms and conditions by which a grantee became committed to completing a project within a discrete budget and a definitive schedule, in compliance with all applicable Federal statutes, regulations, and program requirements. Given UMTA's limited mission as an investor, moreover—UMTA did not manage or make any decisions in the design or construction of a project—the FFGA explicitly limited the Federal government's exposure to cost increases attributable to inadequate project design, engineering, or planning at the local level. Only in the event of "extraordinary" costs (such as Acts of God, excessive inflation, or unanticipated expense for eminent domain or compliance with subsequent Federal law) would UMTA entertain a request to provide funds beyond the amount specified in an FFGA.

Too often, however, FFGAs were negotiated on an individual, ad hoc basis. During the 1980s, in particular, the lack of an exacting protocol for putting a new starts project under an FFGA led to inconsistent contractual terms and conditions, confusion over UMTA grant requirements, and inequity among applicants seeking and competing for Federal funding. By the late 1980s, UMTA recognized the need to ensure a uniform approach in developing FFGAs and in administering projects under FFGAs, to achieve a greater consistency and equity in the national new starts program. In particular, UMTA saw the need to establish a more rigorous project development process and to provide explicit guidance to applicants for FFGAs.

Thus, in 1990, UMTA drafted a model FFGA and an accompanying circular, UMTA C 5200.1. UMTA used the 1990 draft in negotiating FFGAs during the last years of the agency's authorization under the Surface Transportation and Uniform Relocation

Assistance Act of 1987. The Congress consulted the draft circular and model FFGA in crafting several provisions of the Intermodal Surface Transportation Act of 1991 (ISTEA).

2. FEDERAL TRANSIT ACT AMENDMENTS OF 1991. In Title III of ISTEA (the Federal Transit Act Amendments of 1991), Congress renamed UMTA the Federal Transit Administration (FTA). At the same time, Congress expressly authorized FTA to: enter into FFGAs; to establish the terms and conditions of Federal financial participation in new starts projects and the maximum amounts of Federal financial assistance for these projects; to cover the periods of time for completion of these projects, including any periods beyond FTA's current authorization; and to facilitate timely and efficient management of these projects in accordance with Federal law.

In enacting ISTEA, Congress made significant changes to the criteria for evaluating new starts projects. Specifically, ISTEA required that a new starts project be "justified, based on a comprehensive review of its mobility improvements, environmental benefits, cost-effectiveness, and operating efficiencies," as a prerequisite to FTA's award of an FFGA. In effect, through ISTEA, Congress gave FTA an explicit means of comparing the merits of new starts candidates for an FFGA.

Shortly thereafter, in July 1993, FTA formally issued the circular as FTA C 5200.1, together with a model FFGA. The circular set forth the procedure for making an application for an FFGA, consistent with ISTEA; described the purpose of certain terms and conditions in the model agreement; and summarized FTA's project management oversight following the execution of an FFGA. The circular also effected a change of policy concerning "extraordinary" costs; FTA omitted any provision for "extraordinary" costs in the model FFGA, thus signaling that the agency would no longer reimburse those types of costs. Consistent with the circular and model FFGA, FTA awarded nearly 30 FFGAs with funding authorized by ISTEA.

3. FEDERAL TRANSIT ACT AMENDMENTS OF 1998. In Title III of the Transportation Equity Act for the 21st Century (TEA-21)—the Federal Transit Act Amendments of 1998—Congress left much of the past law and new starts policy intact, including the basic criteria for project justification and award of an FFGA. TEA-21 made some significant changes to the new starts program, however, including the following:
 - a. TEA-21 requires FTA to promulgate a regulation on the manner in which new starts projects will be evaluated and rated (Published on December 7, 2000, the regulation is discussed in Section 4 of this chapter).
 - b. TEA-21 requires FTA to rate every new starts project as "highly recommended," "recommended," or "not recommended," in accordance with the criteria and procedures set by the new starts regulation, and to publish those ratings in an annual report to Congress, together with FTA's recommendations on the allocation of new starts funding for the coming fiscal year.

- c. TEA-21 requires a project sponsor to obtain FTA's approval to advance a new starts project into final design.
- d. TEA-21 requires FTA and a project sponsor to enter into an FFGA for any project for which FTA will award more than \$25 million in new start funds.
- e. TEA-21 requires FTA to provide notice to its Congressional authorization and appropriations committees of its intention to award an FFGA for a new starts project at least 60 days before awarding that FFGA.

Previously, FTA had administered the national new starts program through a series of policy statements, not a regulation. FTA had not assigned ratings, per se, to individual new starts projects; and as a rule of thumb, FTA had awarded FFGAs only in those instances in which the agency was committing more than \$100 million in new starts funds for any one project.

- 4. THE MAJOR CAPITAL INVESTMENTS RULE. On December 7, 2000, FTA published a final rule on Major Capital Investments (new starts) Projects at 49 C.F.R. Part 611 (65 Fed. Reg. 76864-84). As mandated by TEA-21, the rule sets forth the criteria by which FTA will evaluate a project on its merits and on its local financial commitment. Further, the rule sets forth the procedure by which FTA will assign a rating of "highly recommended," "recommended," or "not recommended" to each new starts project at least once a year. These ratings denote overall project merit; thus, they enable FTA and Congress to identify those new starts projects that warrant consideration for funding, in part, by the Federal government. The new starts rule includes an Appendix that is a detailed, narrative explanation of the several measures FTA uses for evaluating both project justification and local financial commitment. FTA also, from time to time, publishes technical guidance related to the several project justification and local financial commitment criteria. FTA issued the most recent such guidance, titled "Technical Guidance on Section 5309 New Starts Criteria," in July 2001.
- 5. THE ANNUAL REPORT ON NEW STARTS PROJECTS. FTA is required by 49 U.S.C. § 5309(o)(1) to submit an annual report to Congress "that includes a proposal on the allocation of amounts to be made available to finance" new starts projects in the coming fiscal year. Further, the statute requires FTA to publish in this report its evaluation and rating of each new starts project as "highly recommended," "recommended," or "not recommended." This *Annual Report on New Starts* serves as a collateral document to the President's annual submission to Congress. Typically, the Secretary of Transportation and FTA use the *Annual Report on New Starts*, together with the President's annual budget submittal, as the means to identify those projects that are strong candidates for FFGAs in the near future. They also use the report to identify those projects deserving of new starts funding for further design and engineering, and to summarize the status of projects already under FFGA's and in varying stages of final design and construction.

The annual project funding recommendations depend a great deal on the amount of new starts funding then available under Section 5309(g)(4), both annually and over the

remaining term of FTA's authorization. Further, Federal new starts commitments must not exceed the overall level of commitment authority authorized for the program. For TEA-21, this commitment authority is equivalent to the guaranteed new starts annual level of funding over the authorization period plus three additional years. With respect to any individual project, the Secretary's and FTA's decision to recommend the project will depend on the progress of project development, geographical factors, and any unresolved issues affecting the viability of that project. At a minimum, for a new starts project to be a strong candidate for an FFGA, the project sponsor must have completed a sufficient level of final design to ensure that the cost estimates are firm and must have in place a fully committed financial plan, and the project must have a recommended rating.

6. PROJECT READINESS. In the Conference Reports accompanying both the Fiscal Year 1999 and 2000 Department of Transportation and Related Agencies Appropriations Acts, the surface transportation subcommittees of the House and Senate Committees on Appropriations addressed project readiness for an FFGA. Specifically, the appropriations subcommittees directed FTA to enter into an FFGA for any given project only when there are no outstanding issues that would have a material effect on the estimated costs of the project or the local financial commitment to complete the project. The appropriations subcommittees directed FTA to consider the degree of certainty and any remaining risks in capital cost estimates, and the availability of adequate contingency funds to cover increases in capital costs due to uncertainties; any unresolved issues with respect to non-Federal sources of funding for the project; and the need for acquisition of railroad rights-of-way. The subcommittees also directed that FTA not award an FFGA unless the project had entered final design.

Regardless of whether the appropriations subcommittees continue to issue these directives, FTA intends to make them a standard practice. With regard to cost estimates, FTA will ensure that final design and engineering have been carried out to a level appropriate to the complexity of the project and that the cost estimate incorporates contingencies commensurate with the remaining risks in particularly difficult activities, such as tunneling and real estate acquisition. Further, FTA will direct its Project Management Oversight contractor to make a spot report on the adequacy of the cost estimate and its contingencies and the reasonableness of the project schedule. Additionally, with respect to the sponsor's technical capacity, FTA and its Project Management Oversight contractor will assess the adequacy of the sponsor's project management plan, quality control/quality assurance plan, value engineering, construction schedule, fleet management plans—both bus and rail—and document control plan. With regard to railroad rights-of-way, FTA will insist that the project sponsor has entered into any necessary agreements with freight carriers for shared use of a corridor or assets, facilities, and equipment. With regard to project financing, FTA will ensure that all local sources of funding are in place and that there are no local initiatives that jeopardize the local match. Further, FTA will direct its Financial Management Oversight contractor to assess the sponsor's financial capacity and the reasonableness of the sponsor's financing assumptions, including the completeness of the sponsor's financial plan, and the stability and reliability of the sponsor's financing for both the capital costs of the project and the operation and maintenance costs of the overall transit system.

Included as Attachment C is a sample checklist used by FTA to support the FFGA application process. The actual checklist for each project is to be developed in consultation with the FTA Regional Office; it should reflect the status and particular needs of the participants in the FFGA development process.

7. CONGRESSIONAL NOTICE. FTA is required by 49 U.S.C. § 5309(g)(1)(B) to provide the Committee on Transportation and Infrastructure of the United States House of Representatives, the Committee on Banking, Housing and Urban Affairs of the United States Senate, and the House and Senate Transportation Subcommittees of the Committees on Appropriations 60 days' notice of the agency's intention to award an FFGA. FTA provides this notice by letter to the committees, together with (1) a copy of the draft FFGA the agency proposes to award; (2) a schedule of the total and yearly congressional appropriations FTA believes necessary and appropriate to facilitate the project construction schedule; (3) an analysis of the yearly and total congressional appropriations that can be reasonably planned and anticipated for future FFGAs through FTA's current authorization; and (4) an analysis of FTA's annual commitments for current and anticipated FFGAs as compared with the new starts program authorization.

CHAPTER II

FULL FUNDING GRANT AGREEMENT: APPLICATION AND SUPPORTING DOCUMENTS

1. MAJOR CAPITAL INVESTMENTS--STEPS IN PROJECT DEVELOPMENT. A new starts project becomes a candidate for a Full Funding Grant Agreement (FFGA) when the appropriate steps in FTA's major capital investment planning and project development process have been completed. Competing new starts projects are evaluated on the basis of how well they meet the project justification and financial criteria found at 49 U.S.C. §§ 5309(e)(2)-(7). The statutory criteria, and the means by which FTA evaluates a project against those criteria, are set forth in full in FTA's major capital investment rule at 49 C.F.R. Part 611. The technical methods, assumptions, and calculations that FTA applies in evaluating new starts projects are addressed in detail in the most recent version of FTA's "Technical Guidance on Section 5309 New Starts Criteria," generally updated annually. Project sponsors and applicants for FFGAs should contact the appropriate Regional Office to discuss the planning and project development process as early in that process as practicable. They can also find an overview of the process in FTA's Circular 9300.1, "Capital Program: Grant Application Instructions," at Chapter V, "New Starts."

FTA applies the statutory criteria for project justification and financing at several separate steps of the project development process. Specifically, the criteria are applied: (a) upon an applicant's request to enter into preliminary engineering; (b) upon an applicant's request to enter into final design; (c) upon FTA's development of recommendations for allocating Section 5309 new starts funds in the coming fiscal year in the *Annual Report on New Starts*; and (d) immediately before execution of an FFGA.

In brief, the new starts project development process includes the following steps:

- a. Alternatives Analysis. New starts projects, like all major transportation improvements in metropolitan areas, must emerge from a multi-modal transportation planning and analysis process to be eligible for Federal funding. The joint FTA/Federal Highway Administration (FHWA) rule on metropolitan planning is codified at 23 C.F.R. Part 450 Subpart C. A new starts project must arise from a planning-level "alternatives analysis" that evaluates appropriate modal and alignment options in addressing mobility needs within the area of study. The planning-level alternatives analysis is either input to, or is part of, the evaluation of all reasonable alternatives required by the National Environmental Policy Act (NEPA).

An alternatives analysis is complete once local and regional officials adopt a "locally preferred alternative" (LPA) and the cognizant metropolitan planning organization (MPO) incorporates the LPA into its financially constrained long-range plan.

- b. Preliminary Engineering. Once alternatives analysis is complete, it is appropriate for the sponsor of a new starts project to request FTA's approval for entry into preliminary

engineering. FTA's decision on that request will depend on whether the project sponsor has demonstrated adequate technical capacity to carry out preliminary engineering for the proposed new starts project and whether all other applicable Federal and FTA program requirements have been met. FTA must evaluate and rate the project as "recommended" or "highly recommended" to allow entry into preliminary engineering.

During preliminary engineering the project sponsor continues to refine the design of the locally preferred alternative and any other surviving alternatives. The refinements respond to public comments received during the NEPA review and incorporate measures to mitigate any adverse environmental and community impacts of the proposed project. The more comprehensive engineering work allows the project sponsor to develop more precise estimates of cost and, together with FTA, complete the NEPA process and issue the final environmental document (Final Environmental Impact Statement (FEIS) or Environmental Assessment (EA)). During the NEPA process, the sponsor addresses certain activities that require long lead times to resolve. Examples of long-lead-time items are (1) safety considerations, such as the sharing of railroad right-of-way with freight trains, highway-railroad grade crossings, provisions for pedestrian facilities, transit-airport interfaces, and design of community fences, walls, and noise barriers; (2) utility relocation planning, including the identification of affected utilities, estimation of relocation costs, and the negotiation of agreements; and (3) planning for replacement of wetlands that cannot be avoided. In the later stages of preliminary engineering the sponsor also develops a detailed, comprehensive project management plan to ensure construction quality and financial control, and a financing plan that includes commitments from the sponsor's non-Federal funding partners.

Publication of an FEIS and FTA's issuance of an environmental Record of Decision occur near the conclusion of preliminary engineering.

- c. Final Design. Upon completion of preliminary engineering and upon compliance with all applicable environmental requirements, a project sponsor may request FTA's approval for entry into final design. The sponsor's request must include information sufficient to demonstrate its technical capability and financial capacity to undertake final design. Like the approval to enter into preliminary engineering, FTA must evaluate and rate the project as "recommended" or "highly recommended" to allow entry into final design.

Again, this approval or disapproval will be based upon a review and evaluation of the project costs, benefits, and impacts in accordance with the statutory project evaluation criteria of Section 5309(e)(2)-(7). FTA will approve or disapprove entry into final design within 120 days of receiving a formal request from the project sponsor.

Entry into final design has a higher threshold than entry into preliminary engineering. A project sponsor requesting entry into final design must provide stronger evidence of local financial and land use commitments, in particular, to obtain an overall "recommended" or "highly recommended" rating at this stage. Moreover, as a project proceeds through final design, FTA will expect the sponsor to continue to refine its cost estimates, shore up its

local funding sources, and prepare specific plans for construction and project management.

Once a project has been approved to enter preliminary engineering or final design, FTA will automatically extend “pre-award authority” to that phase of project development. After completion of the NEPA process, grantees also have pre-award authority for real estate acquisition activities. Under pre-award authority, the project sponsor is authorized to incur costs (that are eligible under FTA grant programs) prior to grant approval and retain the eligibility of those costs for subsequent reimbursement by FTA after grant approval. Upon approval to enter into final design, in addition to design work, FTA also extends pre-award authority to costs incurred for real estate acquisition and utility relocation. There are conditions attached to the authority to incur pre-award costs. A full discussion of pre-award authority and Letters of No Prejudice appears in Chapter III, Section 2, “Pre-award and No Prejudice Authority for Costs Incurred in Advance of a Full Funding Grant Agreement.”

In the event that a sponsor has selected the design-build contracting method for all or part of a new starts project, the sponsor may use the process described in FTA guidance entitled “Interim Guidance on Design-Build,” dated September 20, 2000. The guidance can be found on the FTA website at [www.fta.dot.gov/office/public/c0015.html]. Of particular note, no existing FTA requirements have been changed or waived to accommodate the design-build or design-build-operate-maintain process.

- d. Project Ratings in FTA’s Annual Report on New Starts. Each new starts project earning a “recommended” or “highly recommended” rating may enter into preliminary engineering or final design when the project is ready for that particular phase of project development. All new starts projects are evaluated and rated as “highly recommended,” “recommended,” or “not recommended” for FTA’s *Annual Report on New Starts*. Once each year, FTA updates the status of every new starts project that has completed alternatives analysis and for which entry into preliminary engineering has been requested. FTA publishes a profile of that project, together with profiles of all other new starts projects, in the *Annual Report on New Starts*. By law, the report is to be submitted to Congress in February, at the time of release of the President’s Budget for the following year. Each profile features a narrative exposition of the project; a map; the status of the project; a description of funding sources; a summary of the reasons for the overall project rating; and key data on costs, ridership, mobility improvements, environmental benefits, operating efficiencies, cost effectiveness, transit-supportive land use and future patterns, and the stability and reliability of both the capital and operating finance plans.
- e. Project Ratings in FTA’s Supplemental New Starts Report. By law, each August FTA must publish a *Supplemental New Starts Report* in which the agency presents information on those new starts projects that have advanced to preliminary engineering or final design since publication of the most recent *Annual Report on New Starts*. Like the *Annual Report on New Starts*, the *Supplemental New Starts Report* contains an evaluation and rating of “highly recommended,” “recommended,” or “not recommended” for each such project, together with a profile of that project.

- f. Award of a Full Funding Grant Agreement. 49 U.S.C. § 5309(e)(7) requires that an FFGA be “based on the evaluations and ratings” required by 49 U.S.C. §§ 5309(e)(1)-(6); thus, a new starts project must be rated as “recommended” or “highly recommended” immediately prior to award to be eligible for an FFGA. The recital (“whereas”) clauses introducing an FFGA will include an explicit finding that the new starts project is “justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating efficiencies,” and is “supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to construct, maintain, and operate the system or extension.” (See the “Whereas” clauses in the Model FFGA, Appendix B to this circular.)
2. SELECTION OF PROJECTS FOR FULL FUNDING GRANT AGREEMENTS. A rating of “recommended” or “highly recommended” does not directly translate into the award of an FFGA. Rather, the decision to award an FFGA for a particular project, and the total amount of new starts funds to be made available for that project, are at FTA’s discretion. These decisions depend principally on the relative merits of the projects competing for new starts funding; they depend, also, on the availability of new starts funding, both in the current and coming fiscal year and over the term of FTA’s authorization. Thus, the selection of a project may be influenced by “overmatch”—an instance in which the project sponsor willingly commits local funding beyond the required non-Federal share of project costs.

Simply put, a new starts project in final design that is rated “recommended” or “highly recommended” and is sufficiently developed to ensure its viability may be eligible for an FFGA; should FTA choose to execute an FFGA for that project, it will contact the project sponsor to initiate negotiations for an FFGA.

Typically, FTA announces its intention to award an FFGA for a particular project at the same time the President’s budget request for the coming Federal fiscal year is submitted to Congress, usually the first week of February. Both the President’s budget request and the *Annual Report on New Starts* set forth FTA’s recommendations for the allocation of Section 5309 new starts funds in the coming Federal fiscal year, project by project.

3. APPLICATION REQUIREMENTS AND TIMING. The process for developing an FFGA is initiated by FTA and is dependent upon the recommendations made in the President’s Budget. Once FTA contacts a project sponsor to initiate development of an FFGA, the next step will be the project sponsor’s submittal of an application supporting the request for Federal financial assistance. Thus, the project sponsor becomes an “applicant.” Ultimately, when accepted by FTA, the application will be incorporated by reference into the FFGA. Generally, application procedures for capital investment projects, including FFGA projects, are described in full in FTA’s Circular 9300.1A, “Capital Program: Grant Application Instructions;” see, in particular, Chapter V of C 9300.1A, “New Starts.” Those procedures and requirements specific to an FFGA are addressed in this circular.

Consistent with the procedure for all applications for FTA grants, the application for an FFGA must include all documentation required by law and FTA policy. Many of the basic,

uniform documents an applicant must submit are listed and described in an annual FTA notice, published in the *Federal Register*, entitled “Fiscal Year 20-- Annual List of Certifications and Assurances for Federal Transit Grants and Cooperative Agreements.” This notice is available on FTA’s website at [<http://www.fta.dot.gov/library/legal/ca.htm>].

An applicant’s failure to disclose significant information or submittal of erroneous statements in an application may constitute a breach of the FFGA, leading to the withdrawal of Federal funds or a requirement to repay Federal funds previously awarded, or both. “Application” is defined in the text of an FFGA, in pertinent part, as “those documents and written submissions filed by or on behalf” of the applicant “pursuant to its request for Federal financial assistance...and relied upon by the Government as satisfaction of the legal and policy requirements of Grant award. The Application includes all *explanatory, supporting, or supplementary documents related to the Project* that the Government relied upon in its determination to obligate and award Federal funds for the Project...” (Emphasis added.)

The “explanatory, supporting, or supplementary documents” referenced in the definition of an “application,” above, are of two types: those prepared during preliminary engineering and final design in anticipation of an FFGA, and those that ultimately become one of the attachments to the text of an FFGA. The first type of document includes the environmental and historic preservation studies supporting the project, and the applicant’s project management plan, quality control and quality assurance plans, safety and security management plan, fleet management plans (both rail and bus), and financing plans for capital and for operating and maintenance costs. These documents are briefly described in this chapter. The second type of document includes the applicant’s narrative explanation of the scope of the project and the applicant’s project description, baseline cost estimate, budget, baseline schedule, and environmental mitigation commitments. These documents are described in Chapter III, and examples are provided in Appendix B.

4. **ENVIRONMENTAL AND COMMUNITY IMPACT STUDIES.** The objective of FTA’s environmental review process is threefold: to develop and evaluate alternatives to the proposed action that would accomplish the transportation purpose and minimize the cost to the community and natural environment; to fully disclose the probable environmental impacts of a proposed project; and to develop measures to avoid or mitigate adverse environmental effects. Before FTA may award an FFGA or any other type of grant under the Section 5309 capital program, FTA must find that “no adverse environmental effect is likely to result from the project, or no feasible and prudent alternative to the effect exists and all reasonable steps have been taken to minimize the effect.” 49 U.S.C. § 5324(b)(3). The steps for environmental review of an FTA-funded project are set forth in full in the joint FTA/FHWA regulations at 23 C.F.R. Part 771. Project sponsors and applicants for FFGAs can also find an overview of the process on FTA’s website at www.fta.dot.gov/office/planning/ep/index.html.

Almost always, a new starts project entails significant social, economic, or environmental impacts and requires preparation of an Environmental Impact Statement (EIS), leading to FTA’s issuance of an environmental Record of Decision (ROD). In a limited number of cases, a project can be sited and designed in such a way as to avoid significant impacts, and

an Environmental Assessment (EA), leading to FTA's issuance of a Finding of No Significant Impact (FONSI), is appropriate. The FTA Regional Office will decide whether to prepare an EIS or an EA for a particular new starts project, in consultation with the applicant and other interested agencies. The EIS or EA submitted with the application for an FFGA will be incorporated by reference into the terms and conditions of the FFGA, together with any related agreements with third parties regarding environmental protection or historic preservation. Additionally, the mitigation measures identified in FTA's environmental ROD or FONSI will be explicitly incorporated into Attachment 7 of the FFGA, "Measures to Mitigate Environmental Impacts."

5. PROJECT MANAGEMENT PLAN. The Project Management Plan is central to FTA's determination of whether an applicant has the technical capacity and capability to build, operate, and maintain a new starts project. The project sponsor initiates a Project Management Plan during preliminary engineering, and, thereafter, the Project Management Plan is an evolving document that follows the project through preliminary engineering, entry into final design, the application for an FFGA, construction, and testing for revenue operations. The requirement for a Project Management Plan as a prerequisite to an FFGA is set forth at 49 U.S.C. § 5327(a) and in FTA's Project Management Oversight regulation at 49 C.F.R. Part 633. Within 60 days of receiving a Project Management Plan, FTA will decide whether to approve or disapprove the plan, or will notify the applicant that FTA is not yet able to complete its review. In making this determination, FTA may be assisted by a Project Management Oversight contractor. Should FTA disapprove a Project Management Plan, FTA will inform the applicant of the reasons for disapproval.

By the time of submittal of the application for an FFGA, the Project Management Plan must explicitly address, at a minimum, each of the following: the applicant's staffing and organization, budget, schedule, document control, change orders, construction staffing, quality control and quality assurance, materials testing, internal reporting, property acquisition, operational systems testing, and safety and security. Also, the Project Management Plan must require that the plan itself will be updated periodically. The Project Management Plan also must require the applicant to submit a project schedule and budget to FTA each month.

Detailed assistance pertaining to the Project Management Plan can be found in FTA guidance, "Project and Construction Management Guidelines, 1996 Update," which is available on FTA's website; "Quality Assurance and Quality Control Guidelines," which is available from FTA; and in Section 6 of this chapter, below, "Safety and Security Management Plan."

6. SAFETY AND SECURITY MANAGEMENT PLAN. The Safety and Security Management Plan is a component of the Project Management Plan. When a systematic approach to safety and security is applied during the planning, design, construction, testing and acceptance phases of a transit project, it ensures design decisions involving safety and security are logically evaluated and documented and that determinations regarding risk acceptance are clearly communicated and understood. More importantly, it reduces the

likelihood and severity of operational hazards to an acceptable level. This process helps assure that the highest practical level of operational safety is achieved.

A safety and security management plan documents the technical and management strategies for the identification, assessment, prevention, and control of hazards associated with transit operations, including hazards to transit users, the public at large, and transit employees. The safety and security management plan establishes and manages safety and security activities intended to serve as countermeasures to minimize risk and loss of transit agency resources, and to maximize the safety and security of the public during operations.. Accordingly, the safety management plan is a critical component of successful transit operations.

In the Safety and Security Management section of the Project Management Plan, the applicant should identify potential hazards and the safety and security activities to be carried out during each phase of the transit project, including:

- a. Commitment and philosophy to actively sustain safe and secure transit operations;
- b. Integration of the safety and security function during design, construction, testing, and start-up phases of the project;
- c. Assignment of organizational safety and security responsibilities for the project;
- d. Development of safety and security design criteria;
- e. Hazard management process;
- f. Process for verifying conformance with specified safety and security requirements during design, in equipment and materials procurements, and during testing/inspection and start-up phases;
- g. Formal, final safety certification to enter the revenue phase;
- h. Construction safety management activities;
- i. Implementation schedule for meeting State Safety Oversight (SSO) requirements and approvals; and
- j. Waiver application to Federal Railroad Administration (FRA) for transit operations sharing corridors with the general railroad system.

In summary, the plan should define the process for the identification and effective communication of hazards associated with both the construction and operational phases of the transit project, and for verifying the incorporation of safety and security requirements and specifications into each of the development phases to reduce the likelihood and severity of safety hazards and security vulnerabilities to an acceptable level.

7. RAIL AND BUS FLEET MANAGEMENT PLANS. Together with the Project Management Plan, an applicant must submit rail and bus fleet management plans. FTA will not approve or disapprove the applicant's fleet management plans, per se, but the FTA Regional Office and the Program Management Oversight contractor will review the adequacy of those plans as part of FTA's assessment of the applicant's technical and financial capacity.
- a. General. The purpose of fleet management plans submitted in support of an application for an FFGA is to ensure that the applicant's transit service will not be degraded as a consequence of the design and construction of the new starts project, and that the applicant will have adequate service to meet the transit demand for the years leading up to and following construction of the new starts project.
 - b. Rail Fleet Management. A rail fleet management plan should enable a transit operator to properly plan for and carry out the overall management of its entire fleet of locomotives and rail cars. An effective plan will address all the factors that are relevant to the operator's determinations of current and future equipment needs in light of demand, focusing on (a) vehicle life expectancy, (b) the requirements for peak and spare vehicles, (c) strategies for acquisition of new vehicles, and (d) strategies for maintenance and operations. Basic FTA policy on service life, replacement, and overhaul of fixed guideway rolling stock, including spare ratio, early disposition, and like-kind exchange, is set forth in FTA's Circular 9030.1C, "Urbanized Area Formula Program: Grant Application Instructions," at Chapter V, paragraph 15.

At a minimum, the rail fleet management plan submitted in support of a new starts project should reflect a 10-year time frame. Logically, the historical and empirical data compiled through past and current operations of a rail fleet will set the starting point for certain portions of the plan. A rail fleet management plan should address in detail the composition of the fleet, operating conditions, maintenance, facilities, peak vehicle demand, and spare ratio. Guidance on rail fleet management plans may be obtained from FTA Regional Offices.

FTA recognizes that every rail fleet is unique to the environment in which it operates. Several years may pass from the development of technical specifications through the bid process, technical reviews, contractor award, engineering, prototype testing and analysis, to actual production and, ultimately, revenue service. Thus, the rail fleet management plan is a dynamic, not static, document. When a plan needs to be revised, however, whatever the reason, a draft of the revised plan should be submitted to the FTA Regional Office for review and comment.

- c. Bus Fleet Management. An effective plan will address all factors relevant to an applicant's abilities to maintain its current bus fleet, facilities, and levels of service throughout its service area and to provide the requisite capital and operating funds for that service. Additionally, the plan will establish measures for quality of bus service and adequate monitoring of that service. The plan should describe the applicant's entire bus fleet for periods of three-to-five years prior to construction of the new starts project, over the duration of new starts construction, and for at least one-to-three years after

commencement of new start revenue operations. If possible, the applicant's data for past years' operations should closely reflect the data reported to the National Transit Database, and the applicant should provide estimates for future years' operations. Guidance concerning a Bus Fleet Management Plan may be obtained from FTA Regional Offices.

8. FINANCING PLANS—CAPITAL, OPERATING, AND CASH FLOW. 49 U.S.C. Section 5309(d) states that "No grant or loan shall be provided under this section unless the Secretary determines that the applicant has or will have the legal, financial, and technical capacity to carry out the proposed project." Moreover, 49 U.S.C. Section 5309(e)(1) requires FTA to evaluate proposed major capital investments to ensure that they are supported by an acceptable degree of local financial commitment and that local resources are available to operate the full transit system without reducing existing services.

Responding to these statutory requirements, FTA has developed *Guidance for Transit Financial Plans*, dated June 2000, to guide transit agencies developing financial plans. The guidance is available on FTA's web site at <http://www.fta.dot.gov/office/planning/gftfp/gftfp.pdf>. Revisions to the guidance will be added to FTA's web site as issued. FTA requires that applicants requesting or receiving Federal funding through FTA's major capital investment program submit a financial plan that has been prepared in accordance with this guidance. The guidance defines the format, key elements, and scope of an acceptable financial plan, providing detailed examples of each. The financial plan will provide FTA the information needed to evaluate the financial capacity of the applicant to construct, operate, and maintain the proposed project and to continue to provide existing transit services, over a 20-year planning horizon.

FTA conducts financial capacity assessments prior to signing an FFGA. The financial capacity assessment is usually the final and most detailed review of an applicant's financial plan prior to entering into an FFGA. It is conducted to determine whether all aspects of the project are clearly defined, including detailed cost estimates and funding schedules, and whether all funding commitments are in place. This review addresses two distinct items: the financial plan of the project proposed for new starts funding and the overall financial condition of the applicant. In this review FTA considers the applicant's ability to construct and operate the new starts project and also to fund the operations and maintenance of the existing system as well as other improvements in the applicant's capital plan. The financial capacity assessment results in a published baseline report that is forwarded to Congressional appropriating and authorizing committees to use for their 60-day review of the proposed FFGA. Subsequent to the award of an FFGA, periodic spot reports are prepared by FTA as warranted to update the baseline financial capacity report. These updates reassess the applicant's financial condition if significant changes occur relating to the new starts project or if external factors affect the applicant's overall financial outlook.

9. VALUE ENGINEERING. Value engineering is the systematic application of recognized techniques that identify the function of a product or service, establish a value for that function, and determine a way to provide that function reliably at the lowest possible life-cycle cost (capital, operating, and maintenance), consistent with appropriate requirements for

performance, maintainability, safety, and esthetics. In short, value engineering is a multi-disciplined approach to optimizing the use of each dollar spent. Value engineering is not a design review procedure; rather, it is a means for developing ideas for new cost savings and combinations of ideas for consideration and acceptance by both the project designer and owner.

In accordance with FTA Circular 5010.1C, "Grant Management Guidelines," a transit agency must apply value engineering techniques to new starts projects and all other FTA-funded major capital projects. Thus, FTA expects an applicant for an FFGA to identify cost savings during planning, preliminary engineering, and final design of a new starts project, and to achieve those cost savings during construction of the project, as the result of value engineering. Should an applicant decide to use a higher cost product or service when a more reasonable cost alternative has been identified, FTA will reserve the right to determine that Federal funds cannot be used to finance the additional costs. Both the costs of carrying out value engineering and training staff in value engineering techniques are eligible for Federal reimbursement.

An applicant should describe its value engineering efforts in a report submitted in support of the application for an FFGA. The FTA Regional Office, supported by the Program Management Oversight contractor assigned to the new starts project, will review the applicant's efforts and offer comments, if appropriate, during the Regional Office's evaluation of the FFGA application. FTA's guidance, "Value Engineering Process Overview," dated January 1988, presents many useful suggestions for the development of a value engineering program in the context of transit; measuring the effectiveness of a value engineering program; and the application of value engineering in cost and energy modeling and analyses of industrial, manufacturing, and construction methods and materials.

10. UTILITY RELOCATION. The construction of transit systems may require the relocation or rearrangement of privately and publicly owned utilities. These utilities include, but are not limited to, systems and physical plants for producing, transmitting or distributing communications, electricity, gas, oil, crude oil products, water, steam, waste storm water, or other substances; and publicly owned fire and police signal systems. Relocating or rearranging utilities and facilities necessary to accommodate an FTA-funded transit system may be considered an eligible cost as part of an FTA-funded project. If, however, the applicant were prohibited by State or local law from financing utility relocation or rearrangements, such relocation or rearrangement costs would be ineligible for reimbursement under the project.

- a. Eligibility for FTA Funding. To ensure the eligibility of utility relocation for Federal reimbursement, an applicant must enter into agreements (utility relocation agreements) for relocating or rearranging those utilities with the entities responsible for those utilities, prescribing the procedures for relocation or rearrangement for the purpose of constructing the Project and in accordance with the Uniform Relocation requirements of 49 C.F.R. Part 24. As part of its documentation, the applicant must inform FTA of the number of agreements necessary for the Project and the status of the negotiations for those agreements, before FTA can award an FFGA. Moreover, FTA will examine whether any

uncertainties regarding utility relocation may have a material effect on the estimated costs of the Project or the local financial commitment to complete the Project; if so, FTA may require that the negotiations be brought to closure before FTA will award the FFGA.

- b. Utility Relocation Agreements. These agreements are distinguishable from third party contracts in that only actual allowable, allocable, and reasonable costs are reimbursable. Where the work is to be performed by the public utility's forces, no profit is allowed, and reimbursement is limited to the amount necessary to relocate or rearrange the facilities to effectuate a condition equal to the existing utility facilities. Generally, reimbursement would not provide for greater capacity, capability, durability, efficiency or function, or other betterments, except for meeting current state and local codes. Indirect costs of governmental entities incurred under a utility relocation agreement are eligible for FTA reimbursement only in accordance with an approved Cost Allocation Plan as prescribed in Office of Management and Budget Circular A-87, "Cost Principles for State, Local, and Indian Tribal Governments."

In general, FTA practices on utility relocation coincide with those of the Federal Highway Administration, including those practices set forth at the following sources:

- (1) General information at 49 CFR 24.307, "Discretionary Utility Relocation Payments" at [<http://www.fhwa.dot.gov/legisregs/directives/fapg/cfr4924d.htm>] and
- (2) FHWA policy guidance for its regulations, "Utility Relocations, Adjustments, and Reimbursements," at 23 C.F.R. Part 645, Subpart A at [<http://www.fhwa.dot.gov/legisregs/directives/fapg/cfr0645a.htm>].

11. BEFORE AND AFTER STUDY PLAN. FTA's final rule on major capital investment projects (49 CFR Part 611) requires that project sponsors seeking Full Funding Grant Agreements submit a complete plan for the collection and analysis of information to identify the impacts of their projects and the accuracy of their forecasts. This requirement originates with the Government Performance and Results Act (GPRA), and reflects FTA's desire to develop a greater understanding of (a) the actual benefits of New Starts projects, once implemented and in operation; and (b) the degree to which forecasts prepared as part of project planning and development are realized, and the reasons why. FTA refers to the comparison and analysis of planning assumptions, forecast results, and existing transit system characteristics "before" implementation of the New Start project with the project costs and benefits realized "after" two years of revenue service as the "Before and After" Study. FTA further refers to the development of a plan which outlines data collection and analysis activities in support of the Study as the "Before and After Study Plan."

FTA requires the development of the Before and After Study Plan during the final design stage of development. The Plan should cover the collection of information on five characteristics of the project and its associated transit services:

- (a) Project Scope – the physical components of the project, including environmental mitigation;
- (b) Service Levels – the operating characteristics of the guideway, feeder bus services, and other transit services in the corridor;
- (c) Capital Costs – total costs of construction, vehicles, engineering, management, testing, and other capital expenses;
- (d) Operation and Maintenance Costs – incremental operating/maintenance costs of the project and the transit system; and,
- (e) Ridership Patterns – incremental ridership, origin/destination patterns of transit riders on the project and in the corridor, and incremental farebox revenues for the transit system.

The Plan should further address how the data measuring the effects of the New Start project will be collected and how the subsequent analysis of travel patterns and costs “Before” and “After” implementation and operation of the project will be undertaken. It is important to note that the actual collection and documentation of data and information used to forecast project costs, benefits, and impacts must begin during alternatives analysis and continue throughout project development. This information may be documented by reference in the Before and After Study Plan.

Ultimately, the Before and After Study Plan should provide a framework which permits the Grantee to:

- collect information on existing and future transit service and travel characteristics in a manner which ensures comparability;
- perform the analysis of before and after data to discern the effects of the project on the Grantee’s costs, overall transit services, and ridership;
- assess the consistency between predicted project characteristics and performance and its actual characteristics and performance; and
- identify the reasons for any disparity (should any exist) between predicted and actual outcomes.

FTA will approve the Before and After Study Plan prior to execution of a Full Funding Grant Agreement (FFGA). Costs of data collection and analyses associated with the Before and After Study shall be treated as a project cost (that is, included in the Baseline Cost Estimate in the FFGA).

The FTA Office of Planning and Regional Offices are available to provide technical assistance to project sponsors in the development of the Before and After Study Plan, as well as the conduct of each Study. Additional guidance on the Before and After Study is currently under development. Questions on the Before and After Study requirement can be directed to the appropriate FTA Regional Office.

CHAPTER III

FULL FUNDING GRANT AGREEMENT:

TERMS, CONDITIONS, AND ATTACHMENTS

1. PREPARATION OF A FULL FUNDING GRANT AGREEMENT. Once an applicant submits a satisfactory application for a Full Funding Grant Agreement (FFGA), and FTA concurs in all of the supporting documents summarized in the preceding chapter, FTA will invite the applicant to prepare the following items that will become “attachments” to an FFGA: the scope of the project, a colored map of the Project, a project description, a baseline cost estimate, a budget, a baseline schedule, and measures to mitigate environmental impacts. At that same time, FTA will draft the text of an FFGA and the following three additional items to become attachments: a summary of prior grants and related documents, a schedule of Federal funding for the project, and a description of the commitment to carry out a “New Starts Before and After” study. FTA will then merge the applicant’s and FTA’s draft documents into a working draft of an FFGA.

This chapter summarizes the standardized terms and conditions that constitute the text of an FFGA and the attachments to an FFGA, all of which will govern the Grantee and its Project. First, however, this chapter will address certain activities a Grantee may wish to undertake prior to the award of an FFGA; explain the relationship between an FFGA and previous grants for the Project; and note the use of cost data terminology, certain information about the grant award, and FTA’s Master Agreement in relation to an FFGA.

2. PRE-AWARD AND NO PREJUDICE AUTHORITY FOR COSTS INCURRED IN ADVANCE OF A FULL FUNDING GRANT AGREEMENT. Often an applicant will want to preserve the eligibility of certain activities for Federal reimbursement, the costs of which are incurred well in advance of an FFGA. Recently, FTA has established the use of pre-award authority for environmental studies, preliminary engineering, final design, and certain land acquisition activities; and as appropriate, FTA may issue a Letter of No Prejudice (LONP) for capital items that require a long lead-time. The reader should refer to the *Federal Register* Notice, “FTA Fiscal Year 2002 Apportionments, Allocations and Program Information,” of January 2, 2002 (67 *Fed. Reg.* 126 *et seq* (2002)) or the most recent apportionments notice for guidance concerning pre-award authority. The notice can be accessed from [<http://www.fta.dot.gov/library/legal/federalregister/2002/fr1202a.html>] and from [<http://www.fta.dot.gov/library/legal/federalregister/2002/fr1202a.pdf>].

Applicants should keep in mind that their exercise of automatic pre-award or LONP authority is not a guarantee of Federal reimbursement of those costs; FTA can make a commitment of Federal funding for a Project only through the award of a grant or an FFGA. Also, applicants should be aware that the use of Section 5309 new starts funds for costs incurred under pre-award or LONP authority will be counted toward the “Maximum Federal New Starts Financial Contribution” established by the FFGA. Specifically:

- a. Environmental and Historic Preservation Studies. In publishing its Fiscal Year 2002 Notice of Apportionments, Allocations and Program Information (67 *Fed.Reg.* 126, Jan. 2, 2002), FTA extended automatic pre-award authority for costs incurred to conduct studies necessary for compliance with the National Environmental Policy Act (NEPA), Section 4(f) of the DOT Act, the National Historic Preservation Act, and related Federal environmental statutes and regulations, including, specifically, the costs of preparing an Environmental Impact Statement (EIS) or Environmental Assessment (EA) in accordance with NEPA. This pre-award authority applies to Section 5309 new starts funds as well as other Federal funding sources for the Project. It is *automatic* in the sense that it does not require the issuance of any documents. It is effective as of the date of the Federal approval of the relevant Statewide Transportation Improvement Program (STIP) or STIP amendment that includes the Project. This pre-award authority is strictly limited to costs incurred to conduct the NEPA process and prepare environmental and historic preservation documents.
- b. Preliminary Engineering. As noted in Chapter II, once FTA approves a Project's entry into preliminary engineering, FTA will automatically extend pre-award authority for the Project costs of preliminary engineering.
- c. Real Property and Property Rights Acquisition. In publishing its Fiscal Year 2002 Notice of Apportionments, Allocations and Program Information (67 *Fed.Reg.* 126; Jan. 2, 2002), FTA extended automatic pre-award authority for the acquisition of real property and real property rights for a new starts Project upon FTA's issuance of an environmental Record of Decision (ROD) following the publication of an EIS or upon FTA's issuance of a Finding of No Significant Impact (FONSI) following the publication of an EA. The issuance of an environmental ROD or FONSI signifies completion of the NEPA review for a Project. This notice represented a fundamental change in FTA's management of the new starts program. Previously, an applicant had been obliged to obtain a Letter of No Prejudice to preserve the eligibility of real property expenses for Federal reimbursement.

Like the pre-award authority for environmental and historic preservation studies, preliminary engineering, and final design, the pre-award authority for real property and property rights acquisition is *automatic* in the sense that it does not require the issuance of any documents other than the environmental ROD or a FONSI. This pre-award authority is strictly limited, however, to the costs an applicant incurs to acquire real property and real property rights and to provide relocation assistance in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA) and the implementing rule at 49 C.F.R. Part 24. Moreover, this pre-award authority is restricted to the acquisition of real property and property rights that are explicitly identified in the EIS or EA as needed for the selected alternative that is the subject of the environmental ROD or FONSI for the Project. This pre-award authority does not extend to site preparation, demolition, or any other activity that is not strictly necessary for compliance with the URA.

Many new starts require the acquisition of business and residential properties and relocation of the occupants. FTA recognizes that the acquisition of real property and

compliance with the URA require substantial lead-time. Properties must be appraised, displaced persons must be informed of their relocation rights, and new housing must be secured. In some cases, the remediation of contaminated soils or groundwater, the removal of underground storage tanks, or the negotiations for railroad access, will be lengthy and complicated. Thus, FTA's extension of pre-award authority for acquisition of real property and property rights is intended to streamline the project delivery process, enhance relocation services for businesses and residents, and mitigate any escalation in costs. In extending this pre-award authority, FTA notes that the risk taken by the applicant in acquiring real property in advance of an FFGA is mitigated by the re-sale value of the property in the event that FTA does not award an FFGA and the Project is abandoned.

- d. Final Design and Utility Relocation. As noted in Chapter II, once FTA approves a Project's entry into final design, FTA will automatically extend pre-award authority for the Project costs of final design and utility relocation. This pre-award authority is strictly limited, however, to final design and utility relocation; it does not extend to construction or any capital acquisition for a Project.
- e. Letters of No Prejudice for Other Capital Acquisition. Letter of No Prejudice (LONP) authority allows an applicant at its own risk to incur costs for a Project using its own funding sources with the understanding that the costs incurred subsequent to the issuance of the LONP may be eligible for Federal reimbursement or as credit toward the Grantee's local match should FTA award an FFGA for the Project at a later date. In principle, LONP authority applies to any type of Project activity not covered by automatic pre-award authority. FTA guidance on LONP authority is on FTA's website at [<http://www.fta.dot.gov/library/legal/federalregister/2002/fr1202a.html>].
- f. Compliance with Federal Requirements. In exercising any automatic pre-award or LONP authority, applicants should ensure compliance with all Federal requirements before incurring the costs for which they expect to seek Federal reimbursement. With respect to capital acquisitions, in particular, applicants should ensure compliance with FTA's third-party contracting requirements (see Chapter V Section 4 of this circular), real property acquisition and relocation requirements (see Chapter V Section 5 of this circular), and utility relocation requirements (see Chapter II Section 10 of this circular). It should once again be noted that exercise of automatic pre-award or LONP authority is not a guarantee of Federal reimbursement of those costs.

NOTE: Earlier, it was stated that a project sponsor becomes an "applicant" upon filing an application for an FFGA. As a result, the term "applicant" has been used in this section of the circular. Upon award of an FFGA, however, an "applicant" becomes a "Grantee" and the proposed new starts project becomes the "Project." Thus, this circular will use the terms "Grantee" and "Project," when appropriate.

3. RELATIONSHIP OF PRIOR GRANTS TO THE FULL FUNDING GRANT

AGREEMENT. Section 3 of an FFGA defines the relationship between that FFGA and all prior grants and documents related to the Project. This section has three provisions of special note. First, in Section 3 of the FFGA, the Grantee explicitly assures FTA that all certifications, assurances, and documents supporting previous grants and Letters of No Prejudice related to the Project remain valid. Second, this section reiterates that the terms and conditions of the prior grants continue in force and effect, but establishes the FFGA as the controlling contractual agreement for all actions related to the Project from this point forward. Third, this section prohibits the Grantee from adding funds to prior grants related to the Project if the funds will finance activities within the scope of the Project, as defined by the FFGA. Thus, the third provision of this section guards against any circumvention of the limit set as the Maximum Federal New Starts Financial Contribution of capital new starts funds to the Project established by the FFGA.

4. COST TERMINOLOGY. In developing cost estimates and the budget for a Project under an FFGA, a Grantee should take care to properly identify and compute the various cost elements of the Project. Section 1 of an FFGA, "Definitions," sets forth the terminology that will govern the eligibility for Federal reimbursement of the Grantee's costs. FTA recognizes, of course, that only estimated costs, not actual costs, are available at the time an FFGA is awarded. Thus, the Grantee's estimated figures will comprise the "Baseline Cost Estimate" as defined in Section 1 and depicted in Attachment 3. The Baseline Cost Estimate, however, will remain constant through the close of the Project. Many of the terms and conditions of the FFGA are linked to the Baseline Cost Estimate. Other terms and conditions of the FFGA address the mechanics of either the award of Federal funds for the Project or reimbursement of the Grantee's costs. An example applying the cost terminology is presented in Appendix D. The most notable terms in the FFGA are the following:

- a. Baseline Cost Estimate (BCE). The Baseline Cost Estimate is a calculation of all costs of the Project necessary to complete the scope of work under the FFGA and eligible for Federal assistance. It is established at the time of the Government's award of the FFGA. The BCE reflects escalation, contingencies, and schedule dates pertaining to the individual cost elements or contract units. Cost escalation may be based either on year of expenditure or mid-point of construction. The BCE forms Attachment 3 of the FFGA. FTA prefers that Attachment 3 be composed of three separate tables, as illustrated in Appendix B of this circular: (1) a table identifying the individual cost elements or contract units and the amount estimated for that element or unit; (2) a table laying out the calculations for cost escalations; and (3) a table demonstrating the source(s) of funding for each individual cost element or contract unit within the BCE, whether local (a combination of, for example, sales tax revenue, bond revenue, general funds) or Federal (*e.g.*, Section 5309 new starts funds, Section 5309 fixed guideway modernization funds, funds transferred to the Project under the Surface Transportation Program (STP) and Congestion Mitigation and Air Quality (CMAQ) program).
- b. Estimated Total Project Cost. The Estimated Total Project Cost reflects the total anticipated costs of the Project at the time of the FFGA award. Usually it will be the same amount as the BCE. Occasionally, however, a Grantee will choose to pursue

activities or pay for items within the Project scope of work that are not eligible for Federal assistance; in that instance, the Estimated Total Project Cost will be larger than the BCE.

- c. Estimated Net Project Cost. Federal transit law at 49 U.S.C. § 5309(h) requires FTA to estimate the portion of the cost of a Project that reasonably cannot be financed from a grant recipient's own revenues; that portion is then eligible for Federal financial assistance. Thus, the Estimated Net Project Cost of a Project under an FFGA is that portion of the Baseline Cost Estimate that FTA estimates reasonably cannot be financed from the Grantee's revenues. Often, the Estimated Net Project Cost, the Estimated Total Project Cost, and the Baseline Cost Estimate will be the same number.
- d. Estimated Contributions From Other Federal Sources. Funds from Federal sources other than the new starts portion of the Section 5309 capital program may be made available to help finance the Estimated Net Project Cost. Most notably, Grantees may seek to apply funds transferred from the Federal Highway Administration under the STP or the CMAQ program to help finance their Projects. When appropriate, Grantees with existing fixed guideway systems may seek to apply their Section 5309 fixed guideway modernization funding to defray certain types of Project costs. Grantees may also apply their Section 5307 urbanized area formula funds toward the costs of a Project.
- e. Local Share. Local share denotes the Grantee's contractually required share of the Net Project Cost.
- f. Maximum Federal New Starts Financial Contribution. The Maximum Federal New Starts Financial Contribution denotes the limit on the amount of Section 5309 new starts funds that will ever be made available for the Project. The Section 5309 new starts fund is the only source of funding for which the total amount is explicitly limited upon award of the FFGA by the terms and conditions of the Agreement.
- g. Maximum New Starts Amount Awarded. This term identifies the total amount of Section 5309 new starts funds awarded for a Project as of a date certain. Usually, the term is used in conjunction with the words "prior to this amendment," or "with this amendment," or "total, including this amendment." Specifically, "Maximum New Starts Amount Awarded Prior to this Amendment" means the amount of Section 5309 funds that have been awarded prior to the date of the FFGA amendment at hand; "Maximum New Starts Amount Awarded With This Amendment" means the amount of Section 5309 new starts funds awarded under the FFGA amendment at hand; and "Maximum New Starts Amount Awarded Total, Including This Amendment" means the sum total of the Section 5309 new starts funds awarded prior to the FFGA amendment at hand and the Section 5309 new starts funds awarded under the amendment at hand.
- h. Maximum FTA Amount Awarded. This term identifies the total amount awarded of Federal funds administered by FTA from all sources, including those funds transferred from FHWA (e.g., STP and CMAQ), as of a date certain. Usually, the term is used in conjunction with the words "prior to this amendment," or "with this amendment," or

“total, including this amendment” (see “Maximum New Starts Amount Awarded,” above).

- i. Maximum Percentage of New Starts Participation. This term denotes the portion of Project costs which the Section 5309 new starts funds will support. Specifically, the Maximum Percentage of New Starts Participation is calculated by dividing the Maximum Federal New Starts Financial Contribution by that portion of the Estimated Net Project Cost that will be financed by Section 5309 new starts funds.
 - j. Maximum Percentage(s) of FTA Participation. This term reflects the maximum percentage of FTA participation in the Estimated Net Project Cost for each Federal funding source for the Project. FTA determines the maximum percentage that is appropriate for each Federal funding source. FTA calculates these amounts by comparing each of the Estimated Contributions From Other Federal Sources with the portion of the Estimated Net Project Cost to be financed by that source of funding. The Grantee must not exceed the percentage limitation for each particular funding source.
 - k. Anticipated Maximum FTA Funds. The Anticipated Maximum FTA Funds reflects the sum total of the Maximum Federal New Starts Financial Contribution and the Estimated Contributions From Other Federal Sources.
 - l. New Starts Share. The New Starts Share of the costs of a Project is a percentage calculated by dividing the Maximum Federal New Starts Financial Contribution by the Estimated Net Project Cost.
 - m. Overall Federal Share of the Net Project Cost. This is a percentage calculated by dividing the Anticipated Maximum FTA Funds by the Estimated Net Project Cost.
5. FULL FUNDING GRANT AGREEMENT FORMAT: INITIAL PAGES. In Fiscal Year 2001, FTA adopted a new format for the Full Funding Grant Agreement, in which a modified version of FTA’s standard two-page Grant Agreement was combined with the uniform terms and conditions that comprise the text of a Full Funding Grant Agreement. A discussion of this format follows, and an illustration of the format is set forth in the model FFGA at Appendix B to this circular.

First, an FFGA has a Cover Page in which the Name of the Grantee, Project Title, and Project Numbers must be entered. The Cover Page is followed by a Table of Contents in which page numbers must be entered. The next two pages (in which Project specific data must be entered) present much of the same data that is presented within the “FTA Award” portion of FTA’s standard two-page “Grant Agreement.” Like the standard FTA “Grant Agreement,” these pages of an FFGA identify certain key elements of the grant award, including the Project number, the name of the Grantee, the citation of statutes that authorize Federal funding for the Project, the Maximum FTA Amount Awarded (the total amount of Federal funds awarded for the Project, including any amendments), the Amount of This FTA Award, the Maximum Percentage(s) of FTA Participation, the dates of the U.S.

Department of Labor's certifications of transit employee protective arrangements for the Project, and the Estimated Net Project Cost.

In addition, these pages identify the Maximum Federal New Starts Financial Contribution to the Project, the Maximum Percentage of New Starts Participation, and the Revenue Operations Date. The Maximum Federal New Starts Financial Contribution is identified to emphasize the ceiling placed on FTA's allocation of capital new starts funds for this particular Project. The Maximum Percentage of New Starts Participation is set forth to emphasize the ceiling placed on FTA's proportionate contribution of new starts funding for the Project. The Revenue Operations Date is set forth to emphasize the importance FTA ascribes to the Grantee's commitment to complete the Project on schedule. Also, the FFGA identifies documents that are incorporated by reference into the FFGA, such as the Master Agreement. Further, these initial provisions of the FFGA note that FTA or the Federal Government may withdraw its obligation to provide financial assistance for the Project if the Grantee does not execute the FFGA within 90 days of the specified date of the FTA Award.

6. **FTA MASTER AGREEMENT.** The Master Agreement is a set of standard terms and conditions that govern any type of project for which FTA provides financial assistance. It is prepared by FTA, revised and published once a year, and available at FTA's website. The Master Agreement is both referenced and incorporated by reference into the FFGA.

The Master Agreement is the means by which FTA imposes all applicable Federal laws and regulations upon the Grantee under an FFGA or under any other instrument of FTA funding. Additionally, the Master Agreement is the means by which a Grantee becomes obliged to establish appropriate clauses in third party contracts stating third party contractors' responsibilities under Federal law and regulation, and to require the contractors to extend applicable Federal requirements to their subcontractors, as necessary.

Among the Federal statutes and regulations explicitly addressed by the Master Agreement are those pertaining to audits; bonding; civil rights; copyrights; disadvantaged business enterprise; drug and alcohol abuse; environmental protection; ethics (*e.g.*, criteria for debarment or suspension of contractors, restrictions on lobbying); exclusionary or discriminatory specifications in procurement; fraud; patents; preferences for domestic products and services (*e.g.*, Buy America, Cargo Preference); record retention; State safety oversight; and use of federally funded property, equipment, and supplies. Except for the government-wide regulation for land acquisition and relocation requirements, all FTA regulations and most relevant USDOT regulations are accessible through the internet at [<http://www.fta.dot.gov/library/legal/dfregs.htm>]. The regulations for acquiring land, 49 CFR Part 24, are located at [<http://www.fta.dot.gov/office/program/re.htm>]. Regulations of all other Federal agencies are accessible through the Government Printing Office's *Federal Register* homepage: [http://www.access.gpo.gov/su_docs/regulatory.html]. Federal statutes are accessible through the Library of Congress website at [<http://thomas.loc.gov>].

Not every provision of the Master Agreement may apply to a Grantee or a Project under an FFGA. The nature of the Project and the statutory or regulatory mandate will determine which requirements apply. A Grantee uncertain about the applicability of any particular requirement referenced by the Master Agreement should contact its FTA Regional Office.

7. **TERMS AND CONDITIONS.** The model document for an FFGA is set forth in Appendix B to this circular. Nearly the entire text of the model FFGA is composed of uniform terms and conditions that are not negotiable. The reader will note, however, a number of blanks in the model FFGA terms and conditions that call for specific facts and data about a Grantee and its Project. Moreover, Section 8 of the model FFGA, which prescribes the limit on Federal capital new starts funds for the Project, sets forth alternative provisions to account for any new starts funds previously awarded for the Project.

The following pages address the provisions of the Terms and Conditions of the model FFGA that vary with the Grantee or the Project—the “variable” provisions. The number of each item listed below is keyed to the number identifying each blank space or alternative provision in the model.

- (1) **Introductory Paragraph:** Identifies the Grantee.
- (2) **Whereas Clause 1:**
 - (a) Describes the Project.
 - (b) Describes the geographic location, city and state, of the Project.
- (3) **Whereas Clause 3:**
 - (a) Identifies the total amount of capital new starts funds FTA has previously obligated through prior Grants for engineering and design of the Project.
 - (b) Identifies the total amount of capital fixed guideway modernization funds FTA has previously obligated through prior Grants for engineering and design of the Project.
 - (c) Identifies the total amount of Urbanized Area Formula Program funds FTA has previously obligated through prior Grants for engineering and design of the Project.
 - (d) Identifies the total amount of Surface Transportation Program funds FTA has previously obligated through prior Grants for engineering and design of the Project.
 - (e) Identifies the total amount of Congestion Mitigation/Air Quality funds FTA has previously obligated through prior Grants for engineering and design of the Project.

- (4) **Whereas Clause 4:** Identifies the amount of the Maximum Federal New Starts Financial Contribution. This is the fixed limit of the Federal commitment of capital new starts funds for the Project as set forth and described in Section 8 of the FFGA.
- (5) **Section 1, Definition of “Grantee.”** Identifies the name of the Grantee.
- (6) **Section 1, Definition of “Master Agreement.”:** This section identifies:
 - (a) the Federal Fiscal Year of the FFGA in Section (6a);
 - (b) the Master Agreement Form Number in Section (6b); and
 - (c) the Date of the Master Agreement in Section (6c).
- (7) **Section 5.** Identifies a date certain, the “Revenue Operations Date,” in Section 5(a) by which the Grantee commits to make the Project operational in accordance with the mass transportation functions described in Attachments 1 (Scope of the Project) and 2 (Project Description) and the Grantee’s Application requesting Federal financial assistance.
- (8) **Section 7.** The dollar figure in Section 7(a) identifies the “Estimated Net Project Cost.”
- (9) **Section 8 (Alternative Provisions):** If FTA expects to award capital new starts funds for the Project when it awards the FFGA:
 - (a) the amount of new starts funds obligated with the Award and the total amount of new starts funds obligated will be identified in Section 8(a);
 - (b) the remaining amount of capital new starts funds FTA expects to obligate in the future for the Project will be identified in Section 8(b)(1); and
 - (c) the total amount of capital new starts funds FTA will obligate for the Project will be identified as the Maximum Federal New Starts Financial Contribution in Section 8(c), which will equal the sum of the amounts in Sections 8(a) and 8(b)(1).

If FTA does not expect to award capital new starts funds for the Project when it awards the FFGA:

- (d) the total amount of capital new starts funds FTA expects to obligate for the Project will be identified in Section 8(b)(1);

- (e) this same amount of capital new starts funds will be identified as the Maximum Federal New Starts Financial Contribution in Section 8(c).
- (10) **Section 10:** The dollar figure in Section 10(d) identifies the Grantee's financial commitment to the Estimated Net Project Cost. This is the total estimated Local Share and is the amount required to match the Maximum Federal New Starts Financial Contribution and estimated contributions from other Federal sources at the funding ratios set forth in the Grant Agreement.
- (11) **Section 20:** This section identifies:
 - (a) the Master Agreement Form Number (same as identified in Section 6b); and
 - (b) the Date of the Master Agreement (same as identified in Section 6c).
- (12) **Section 24:** This section identifies:
 - (a) the name and address of the appropriate FTA Regional Administrator; and
 - (b) the name and address of the appropriate Grantee officer.
- (13) **Section 25:** Identifies the state in which the Grantee is a legal entity and does business.

There is one notable exception to the use of the uniform terms and conditions set forth in Appendix B to this circular: On occasion—usually, in connection with the construction of intermodal facilities and equipment that are interrelated to a transit project, such as the construction of adjacent highway or airport improvements—FTA and a Grantee may add certain terms and conditions to the text of an FFGA to address the roles and responsibilities of third parties who will construct those related facilities and equipment. Examples of FFGAs for Projects featuring intermodal facilities and equipment are available through FTA's Regional Offices.

8. **ATTACHMENT 1: SCOPE OF THE PROJECT.** Attachment 1 to the FFGA, the "Scope of the Project," should be a brief narrative statement of the purpose and objective of the Project, an explanation of its key elements, and a summary of its basic operational functions. Typically, for a fixed guideway, Attachment 1 will identify the location of the Project, the length of the guideway, the mode of transit, the number and type of stations, the approximate number of transit vehicles, the location and type of maintenance facilities, and the installation of communication and control systems. Attachment 1 should also describe the Project in relation to the Grantee's existing transit system.
9. **ATTACHMENT 1A: PROJECT MAP.** Attachment 1A should be an 8 ½ x 11-inch *color* map of the Project, showing the Project alignment, a north arrow, major streets and highways

the line intersects, existing tracks and proposed tracks, type and location of facilities, stations, and location of proposed improvements.

10. ATTACHMENT 2: PROJECT DESCRIPTION. Attachment 2 to the FFGA, “Project Description,” should identify and describe individual contract units for each of the discrete activities necessary to accomplish the stated purpose, objective, and transportation functions of the Project. All contract units can then be carried forward into Attachment 3 (Baseline Cost Estimate) and, as appropriate, Attachment 4 (Baseline Schedule), thus providing FTA and the Grantee a convenient means of tracking each activity through design and construction towards implementation, and comparing actual to estimated costs.

A Grantee should ensure that Attachment 2, “Project Description,” not extend or alter the Project that was the subject of study in FTA’s environmental record and the findings and determinations in FTA’s environmental Record of Decision or Finding of No Significant Impact. Otherwise, FTA and the Grantee must conduct a supplemental environmental study and evaluation before the parties can enter into an FFGA.

11. ATTACHMENT 3: BASELINE COST ESTIMATE. Attachment 3 to the FFGA, the “Baseline Cost Estimate,” records the estimated cost of the Project at the time FTA and the Grantee execute the FFGA. The Baseline Cost Estimate is derived from the cost estimates of the individual third party contracts and force account work that, in sum, constitute the Project. The Baseline Cost Estimate should reflect appropriate escalation and contingency computations and Project schedule dates. (“Baseline Cost Estimate” is defined in Section 1 of the FFGA and referenced in Section 13 of the FFGA. “Force account” and “third party contract” are defined in Appendix A of this circular.)

The Baseline Cost Estimate is a critical tool for Project management. FTA and its Project Management Oversight contractor will monitor the costs of the Project throughout design and construction by comparing the Grantee’s actual performance against the Baseline Cost Estimate. FTA expects the following information and data to be readily available through the Baseline Cost Estimate:

- a. Contract Units: The cost estimate for each Project activity should be itemized by contract unit unless a contract unit format is inappropriate under the particular circumstances of the Project and FTA has approved another type of format.
- b. Estimated Total Project Cost: The Baseline Cost Estimate should reflect the items eligible for Federal assistance within the Estimated Total Project Cost.
- c. Consistency with Project Description: The Baseline Cost Estimate should encompass the entire Project, including, specifically, all of the activities identified in Attachment 2, “Project Description.”
- d. Cost Escalation: The Baseline Cost Estimate should reflect the base year cost and the escalation values the Grantee used in calculating the cost estimate for each contract unit. A Grantee may use either a Year-of-Expenditure or Mid-Point of Construction method

for calculating cost escalation; the method chosen should be noted on Attachment 3. This circular's example Baseline Cost Estimate uses a Mid-Point of Construction escalation method. FTA has no preference. The Year-of-Expenditure method is also fully acceptable.

- e. Financing Costs. Interest and other financing costs incurred during the development and construction of new starts projects are eligible for reimbursement with Section 5309 new starts funds, as stated in 49 U.S.C. 5309(g)(2)(B) and in 49 U.S.C. 5309(n)(2) and (3). Interest and other financing costs are eligible for reimbursement with Section 5307 formula funds as stated in 49 U.S.C. 5307(g)(3). Eligible project-related interest expenses are those expected to be paid by the grantee prior to either completion of the project or the fulfillment of the Section 5309 new starts funding commitment, whichever occurs later in time. These projected interest costs must be included in the FFGA baseline cost estimate if the grantee wishes to use Federal funds to pay a portion of these financing costs. Interest expenses expected to be incurred after completion of the project or after the fulfillment of the Section 5309 new starts funding commitment may not be included in the FFGA baseline cost estimate and are not eligible for reimbursement with Section 5309 new starts funds.
- f. Milestones. For each contract unit, Attachment 3 should identify the anticipated contract activity dates for issuance of notices to proceed, midpoint of contract performance, and completion of contract performance.
- g. Contingencies: The Baseline Cost Estimate should identify the amount of contingency included in the Grantee's cost estimates. Contingencies may be presented in one of the following ways: (1) a contingency amount may be included in each line item; (2) there may be a separate contingency amount for the Project as a whole, reflecting remaining uncertainty, and no contingency amounts in the contract units; or (3) there may be both an overall Project contingency amount and a contingency amount in each line item.

12. ATTACHMENT 3A: PROJECT BUDGET. With Attachment 3, the "Baseline Cost Estimate," the Grantee will prepare an Attachment 3A, "Project Budget." A Project Budget is a budget for the entire project setting forth the funding sources and activity line items associated therewith and may include funding from other grants that form the total amount of FTA funding for the FFGA. The Project Budget is a listing of costs arrayed by FTA scope and activity line item code, in contrast with the Baseline Cost Estimate which identifies contract units. Like the Baseline Cost Estimate, typically the Project Budget is not amended or modified during the Project.

13. ATTACHMENT 4: BASELINE SCHEDULE. Attachment 4 to the FFGA, the "Baseline Schedule," complements Attachments 2 (Project Description) and 3 (Baseline Cost Estimate) in that the Baseline Schedule reflects each of the contract units at the beginning of performance, mid-point of performance, and completion. FTA prefers that a Baseline Schedule be presented in a bar chart format that readily highlights the major milestones and the Project's path toward the Revenue Operations Date. Pursuant to Section 14 of the FFGA, "Baseline Schedule," Attachment 4 will not be modified during design and construction since

it will be used to compare planned Project implementation to actual performance. Moreover, per Section 14 of the FFGA, a Grantee must notify FTA of any developments that threaten the Grantee's achievement of the Revenue Operations Date and the actions the Grantee intends to take to recover any slippage in the Baseline Schedule.

14. ATTACHMENT 5: PRIOR GRANTS AND RELATED DOCUMENTS. Attachment 5 to the FFGA, "Prior Grants and Related Documents," serves to identify the milestones in Project development and the previous FTA funding for the Project. Attachment 5 is set forth in three sections:

- a. Section I, Prior Grants. The first section of Attachment 5 lists all FTA grants prior to the FFGA through which FTA awarded funds for any type of Project development activity that will not be deemed part of the Baseline Cost Estimate set forth in Attachment 3. This could include grants for the alternatives analysis that resulted in the Project, and for planning, engineering, or capital projects. Typically, preliminary engineering and final design costs are included in the Baseline Cost Estimate. The information for each such grant should include the Project number, date of the FTA Award, sources and amounts of Federal funding, and a brief description of the activities funded through that grant.

If FTA did not provide any Federal financial assistance for Project development, the Grantee should submit a statement to that effect and this section of Attachment 5 will be worded accordingly.

- b. Section II, Related Documents. The second section of Attachment 5 lists the milestones of Project development in chronological order, including, specifically, the date of selection of the locally preferred alternative, the date of FTA's approval for entry into preliminary engineering, the date of FTA's environmental Record of Decision or Finding of No Significant Impact, and the date of FTA's approval for entry into final design.
- c. Section III, Project Grant History. The third section of Attachment 5 lists all FTA grants through which FTA awarded funds for any type of Project activity costs that will be deemed part of the Baseline Cost Estimate of Attachment 3. The purpose of this section of Attachment 5 is to provide an easily accessible history of Federal funding for the Project to apply against the Baseline Cost Estimate.

Thus, this section of Attachment 5 includes grants for preliminary engineering that will be ascribed to Estimated Total Project Cost under the FFGA. This section also includes the sources and amounts of funds provided under FTA's formula, flexible, and fixed guideway modernization programs that will be reflected in Attachment 6 to the FFGA, the Schedule of Federal Funds for the Project. The FTA Regional Office will update this section of Attachment 5 in TEAM Web with each award of any Federal funds listed in Attachment 6. However, when FTA approves urbanized area formula funds for the Project that are not part of the Federal funding to be provided under an FFGA, the FTA Regional Office will not update TEAM Web to reflect those funds until the next routine annual amendment of the FFGA that awards Section 5309 capital new starts funds for the Project.

15. ATTACHMENT 6: SCHEDULE OF FEDERAL FUNDS. Attachment 6 to the FFGA, the “Schedule of Federal Funds for the Project,” provides a year-by-year listing of the anticipated sources and amounts of Federal funding for the Project, together with the corresponding sources and amounts of the Grantee’s funding for the Project, in a table format. Most notably, Attachment 6 sets forth the amount of Section 5309 capital new starts funds FTA intends to recommend that the Congress appropriate for the Project, year-by-year, to fulfill the Federal contractual commitment to the Project and to facilitate the Grantee’s construction schedule. Typically, FTA and a Grantee will discuss their mutual expectations for Federal and local funding, year-by-year, in some detail, in connection with FTA’s review of the Grantee’s financing plan for the Project. In developing the final new starts payment schedule, FTA must take into account the entire caseload of FFGA payment schedules and the anticipated annual budget levels for the new starts program. It is the Congress, however, that determines the actual amount of capital new starts funds that will be made available for the Project in any given Federal fiscal year; the Congress makes this determination through its enactment of the annual USDOT Appropriations Act.

Additionally, the text of Attachment 6 will cite the Federal statute that authorizes the Project for final design and construction, note whether the Baseline Schedule extends beyond the current authorization of the Federal transit program, and state whether FTA intends to provide Federal funds for the Project in years beyond the current authorization.

16. ATTACHMENT 7: MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS. Attachment 7 to the FFGA, “Measures to Mitigate Environmental Impacts,” sets forth the mitigation measures identified in FTA’s environmental Record of Decision (ROD) or Finding of No Significant Impact (FONSI) for the Project. The purpose of Attachment 7 is to assist FTA and its Project Management Oversight contractor in monitoring the Grantee’s implementation of the adopted mitigation measures. A Grantee should note, however, that Attachment 7 does not supersede or negate any of the commitments for environmental mitigation established through FTA’s environmental record leading to the environmental ROD or FONSI: specifically, Attachment 7 does not supercede or negate the mitigation measures identified in a Final Environmental Impact Statement (FEIS), Environmental Assessment (EA), Section 4(f) Evaluation, or any Memoranda of Agreement or Understanding or related agreements with third parties for protection of environmental or historic resources. Often these mitigation commitments will incorporate an obligation to conduct further consultation with certain resource agencies on specific design issues that may arise during later Project stages. Pursuant to Section 16 of the FFGA, the Final EIS or EA, environmental ROD or FONSI, Section 4(f) Evaluation, and related agreements and supporting documents are incorporated into and made a part of the FFGA. Moreover, pursuant to Section 16 of the FFGA and Section 25 of the Master Agreement, “Environmental Requirements,” the Grantee is prohibited from withdrawing or substantially changing any of the mitigation measures identified in FTA’s environmental record for the Project without express written approval by FTA.
17. ATTACHMENT 8: NEW STARTS “BEFORE AND AFTER” STUDY. Attachment 8 to the FFGA, New Starts “Before and After” Study, documents the Grantee’s commitment to carry out the requirement of the Major Capital Investments rule, 49 C.F.R. § 611.7(d)(7), that

a Grantee conduct a “before and after” study to gauge the benefits of the Project and the accuracy of forecasts prepared during the Project’s development. Specifically, Attachment 8 requires a Grantee to assemble and analyze information on five characteristics of the Project - its physical scope, service levels, capital costs, operation and maintenance costs, and ridership patterns.

Data assembly must be undertaken to reflect three key milestones. The first milestone pertains to the collection of *predicted* values of the five characteristics listed above. These values must be documented (1) during alternatives analysis, (2) during preliminary engineering, and (3) during the initial stages of final design leading to execution of an FFGA.

The second milestone occurs immediately *before* any major change in transit or highway conditions caused by implementation of the Project – by either its construction or, absent any substantial disruptions caused by construction, its opening to revenue service. At that milestone, the Grantee will assemble information on existing transit service levels, operating and maintenance costs, and transit ridership and revenues.

The third milestone occurs two years *after* the project has opened to revenue service. At that milestone, the Grantee will assemble information on the outcomes for all five project characteristics.

Attachment 8 requires the Grantee to collect and analyze the before and after data to discern the effects of the Project on the Grantee’s costs, overall transit services, and ridership. Attachment 8, in addition, requires the grantee to assess the consistency between the predicted Project characteristics and performance and its actual characteristics and performance (as measured two years after the Project has opened for revenue service), and to identify the reasons for any disparity, should disparity exist, between predicted and actual outcomes.

The costs of collection and analyses of these data and the Grantee’s reporting of its findings are eligible for Federal reimbursement.

CHAPTER IV

RECORDING THE FULL FUNDING GRANT AGREEMENT IN ELECTRONIC FORM

1. GENERAL. All applicants for FTA grants must use the FTA's electronic award and management system, TEAM Web, to submit information and reports to FTA. By the time an applicant for a Full Funding Grant Agreement (FFGA) is ready to record the FFGA application in electronic form, one can expect that applicant to be familiar with TEAM Web. FTA Circular 9300.1, "Capital Program: Grant Application Instructions," Chapter VII, describes the steps for developing a project budget for entry into TEAM Web. Periodically, FTA offers TEAM Web training both in classes through its Regional Offices and in "distance learning" sessions. Internet access and a telephone are required for the distance learning sessions. Information on training on TEAM Web is available from the Regional Office with responsibility for FTA grants in the applicant's geographic area. Guidance for entering information into TEAM Web can be found at [\[http://ftateamweb.fta.dot.gov\]](http://ftateamweb.fta.dot.gov).

Certain characteristics of recording an FFGA in electronic form are unique, compared with processing other types of FTA grants. These unique characteristics are addressed in this chapter.

2. PROJECT NUMBERING FOR A FULL FUNDING GRANT AGREEMENT. When FTA has previously awarded a grant for preliminary engineering, final design, or capital activity on the Project from the Section 5309 capital new starts program, and those funds are to be counted towards the Maximum Federal New Starts Financial Contribution set by Section 8 of the FFGA, the FFGA is transacted as an amendment to the earlier grant. The sequential numbering of the amendments helps FTA and the Grantee keep track of the Project's history. For example: a previous grant for final design may be numbered ST-03-0123, with an amendment number of "00." The "00" at the end indicates that this is the original grant-- "ST-03-0123-00." ("ST," in this instance, represents the state in which the Project is located, "03" is the code assigned by FTA's financial systems to the FTA capital program, "0123" indicates that the Project is the 123rd project in that state funded under the FTA capital program, and "00" indicates that this is the original grant for the project.) If more than one source of Federal funds supports an FFGA (*e.g.*, new starts funds and formula funds), then each source will have a separate project number.

When the FFGA is awarded as an amendment to a previous grant, the transaction is then recorded as "ST-03-0123-01" or "ST-03-0123-02" and so forth, depending upon the number of amendments that preceded the FFGA. Conversely, in an instance in which no Section 5309 capital new starts funds have been previously awarded for the Project, the FFGA will be assigned an entirely new project number with "00" in the amendment space.

3. SIMULTANEOUS CREATION OF TYPEWRITTEN (PAPER) AND ELECTRONIC VERSIONS OF THE FULL FUNDING GRANT AGREEMENT. At the same time FTA awards an FFGA in typewriting (on paper), FTA will simultaneously record and award the FFGA in electronic form; the date of the Federal Transit Administrator's signature on the

typewritten version of the FFGA will be the same date as the electronic award date. To the extent any discrepancy may arise between the typewritten and electronic versions of the FFGA, however, the typewritten version will prevail. Should the electronic award include any special conditions for Federal funding for the Project, those conditions are incorporated by reference into both the typewritten and electronic versions of the FFGA. (See Section 21 of the model FFGA, Appendix B to this circular.)

Occasionally, the typewritten version of an FFGA is executed by the Grantee as part of a public ceremony. In these instances, FTA and Grantee staff must take care to ensure that the date of the electronic award of funds for the Project is the same date as the date appearing on the typewritten version of the FFGA. If necessary, an FTA Regional Office staff member will ask a Grantee to delay its electronic execution of the FFGA to ensure that the dates do in fact coincide. If a Grantee has reason to believe the dates of execution of the typewritten version of the FFGA and the electronic version of the FFGA will differ, the Grantee should contact its FTA Regional Office before executing the FFGA electronically.

4. CONVERSION OF INFORMATION INTO FTA'S ELECTRONIC AWARD AND MANAGEMENT SYSTEM (TEAM Web).

- a. Approved Project Budget. For each project number supporting the Project there will be an Approved Project Budget. The Approved Project Budget is a central part of TEAM Web. An Approved Project Budget is prepared for each separate grant application entered into TEAM Web and is used for any type of FTA grant. The Approved Project Budget is tied to a specific award and reflects only those funds currently obligated for the specific project number. If more than one source of Federal funds supports an FFGA, then each source will have a separate Approved Project Budget and, as earlier stated, a separate electronic project number to reflect the funds from that source currently awarded toward the Project. The Approved Project Budget for all electronic project numbers supporting the Project are "rolled up" into Attachment 3A, Project Budget. Conversely, data to form the "Project Budget" will ultimately be distributed through the "Approved Project Budget" of each electronic project number for which funding for the FFGA has been provided.

The Approved Project Budget is amended with each succeeding award of Federal funds under an FFGA. Moreover, an Approved Project Budget is revised as necessary during construction to record actual costs incurred as a Project moves towards completion.

One constraint of TEAM Web is that it manages only one source of funds for each Project entered into the system, reflecting the funding obligated as of the date on which the system is accessed. Thus, the "Approved Project Budget" in TEAM Web will represent only those funds from the single funding source identified for the Project that have been appropriated and obligated on the date when the system is viewed. Therefore, the Approved Project Budget will serve only to match the budget description in Attachment 3 once all FTA new starts funds have been awarded. It may be necessary to look at more than one FTA grant in order to gauge progress toward the budget description in the Full Funding Grant Agreement.

Please note that because TEAM Web is employed to track funding for all types of FTA projects, the system uses the umbrella term "Total Eligible Cost," in lieu of the more limited term "Net Project Cost," which is expressly defined by law.

- b. Attachments. Attachments, including the "Baseline Schedule," will be incorporated into the electronic FFGA using the attachment feature. FTA will incorporate the attachments into TEAM Web under Project Information, using the "paper clip" icon that permits inserting files. FTA will also add the following sentence concerning the Attachments under FTA Comments/Conditions of Award/Attachments.

"The following documents entered as Attachment part of TEAM Web are incorporated by reference and made part of this Grant Agreement:"

The sentence will be followed by a listing of the specific attachments.

To view such attachments, use any screen with the paper clip icon, select Project Information, and select the attachment desired. The software application used for the attachment must be one that is compatible with FTA applications currently in use. The reader should contact the appropriate FTA Regional Office to determine the software applications currently in use. The attachment procedure is the same for all FTA electronic awards. The Grantee is obliged to ensure that Project information, such as the milestones, entered electronically is consistent with that in the paper copy version of the FFGA.

The overriding objective in incorporating the attachments into the electronic FFGA is to make certain that all necessary information is entered, that it is clear, and that it is consistent with the paper copy version of the FFGA.

5. U.S. DEPARTMENT OF LABOR CERTIFICATION FOR A FULL FUNDING GRANT AGREEMENT. Before FTA awards an FFGA, FTA must submit the entire "Project" to the United States Department of Labor (USDOL) to enable USDOL to certify the labor protection arrangements for the Project in accordance with 49 U.S.C. § 5333(b) (formerly "Section 13(c)" of the Federal Transit Act, as amended). For USDOL to certify the Project in its entirety, the applicant for the full funding grant and FTA must present the requisite information covering the entire scope of the Project and indicate the amount of the Maximum Federal New Starts Financial Contribution. If USDOL certifies the Project in full at the amount of the Maximum Federal New Starts Financial Contribution, an FTA amendment authorizing the Grantee to draw down a portion of the Maximum Federal New Starts Financial Contribution will not require a new referral for a new USDOL certification. A new referral and new USDOL certification will be required if: (1) the amount of the funds to be drawn down, added to the amount of funds previously drawn down, exceeds the Maximum Federal New Starts Financial Contribution for the Project; or (2) if the amendment is for something outside the scope of the original Project.

Thus, when FTA seeks a USDOL certification covering the Project in its entirety, it is essential that the initial electronic budget submitted to USDOL accurately reflect costs

arrayed in Attachment 3 to the FFGA, the Baseline Cost Estimate. In TEAM Web, the Baseline Cost Estimate for a Project is usually entered in two forms, labeled “Attachment 3” and “Attachment 3A.” Attachment 3 lists costs by contract unit; Attachment 3A lists costs by FTA’s codes for scope numbers and project activity line items. (Baseline Cost Estimate information is also entered under the heading “Project Information,” subheading “Control Totals.”) The Baseline Cost Estimate that should be transmitted to USDOL is the “Attachment 3A” form listing the FTA activity line item codes, not the “Attachment 3” form depicting contract units.

It is imperative that USDOL have a clear understanding of the scope of the Project. Toward that end, USDOL must be given the Project description, budget, and all necessary information regarding labor unions.

Once a Project is referred to USDOL for certification of the entire Project, the budget information in the electronic grant application must be revised to reflect the fact that only a portion of the total Federal funding for the Project will be made available upon execution of the FFGA, not the entire amount of the actual Federal contribution to be made to the Project. In some cases, no FTA funds are obligated when the FFGA is awarded; rather, the FFGA is a “zero dollar amendment.” Thus, the Grantee must revise the electronic budget, as well as the “Control Totals” under “Project Information,” to reflect only those Federal funds that have been awarded.

To illustrate: If the Federal funding commitment to a Project is \$200 million, but only \$20 million in Federal funds are made available upon award of the FFGA, the Grantee would enter only \$20 million in the electronic budget; additionally, the Grantee would enter the specific Project activity line items on which that \$20 million would be expended (*e.g.*, final design, acquisition of right-of-way, utility relocation). The Grantee would also record the necessary information in “Control Totals” under “Project Information.”

6. ELECTRONIC AMENDMENTS TO A FULL FUNDING GRANT AGREEMENT. At any time following execution of an FFGA, an award of additional Federal funds for the Project will be transacted as an amendment to the original grant. At that time, FTA will revise Attachment 5 to the FFGA, “Prior Grants and Related Documents,” with a change to “Project Grant History.” Specifically, FTA will revise this section of Attachment 5 by entering the number of the amendment, the sources and amounts of Federal funds awarded, and the obligation date. Also, FTA will notify USDOL that the FFGA is being amended to award additional Federal funds for the Project consistent with the scope of the Project that USDOL previously certified. FTA will enter a copy of the revised Attachment 5 electronically to each amendment to the grant; the copy will be placed in TEAM Web under Conditions of Award.
7. ILLUSTRATIONS OF ELECTRONIC ENTRIES. Immediately following are five tables of Project budgets that illustrate the types of data and information entered into TEAM Web. Table 1, “Example FFGA Budget as Initially Submitted Electronically” depicts the initial electronic entry of the budget for the Project in its entirety; it is this depiction of the entire Project that will be referred to USDOL for certification of labor protection arrangements.

Table 2A, “No Federal Funds Are Awarded at the Time of FFGA Approval,” depicts an electronic entry at the time of award of the FFGA and after USDOL certification. This table shows that no Federal funds will be provided at the time of award; that is, the award is a “zero-dollar” FFGA or a “zero-dollar amendment” to a grant.

Table 2B, “Some Funds Are To Be Awarded with Approval of the FFGA,” also depicts an electronic entry of the award of an FFGA after USDOL certification, but this table shows that some amount of Federal funds will be awarded.

Table 3, “An Example Grant Amendment To Provide Annual Funding Increment, After Approval of the FFGA” depicts an electronic entry of an annual award of Federal funds per an amendment to an FFGA.

Table 4, “Approved Project Budget,” shows how an Approved Project Budget appears to a viewer on TEAM Web once FTA obligates funds under the electronic project number. This Approved Project Budget changes every time FTA obligates additional funding under the electronic project number.

Table 1
Example FFGA Budget as Initially Submitted Electronically
Includes Estimated Project Totals To Be Sent to DOL for Certification

The Control Totals for the Amendment in "Project Information" are Federal: 521,545,484 Local: 353,429,516 Total: 874,975,000.

SCOPE	DESCRIPTION	Federal	Total
131-00	New Start - Purchase New Revenue Rolling Stock and Related Equipment	\$63,666,128	\$106,809,994
	13.13.20 New Accessible LRT Cars and Related Equipment for Expansion	\$ 63,666,128	\$ 106,809,994
132-00	New Start - Design / Build Contract	\$366,351,289	\$614,612,203
	13.21.20 Transitway Lines - Eng/Design - Final Design	\$ 41,441,150	\$ 69,524,080
	13.23.03 Transitway Lines - Construction - Line / Structures	\$ 197,580,718	\$ 331,472,890
	13.33.02 Station Stops/Terminals - Construction of 13 Stations	\$ 56,621,438	\$ 94,991,413
	13.53.20 Electrification - Construction	\$ 28,776,925	\$ 48,277,841
	13.63.20 Communications and Train Control - Construction	\$ 31,260,546	\$ 52,444,508
	13.76.95 Utility Relocation	\$ 10,670,512	\$ 17,901,471
132-01	New Start - Central Corridor Upgrades	\$2,203,482	\$3,696,690
	13.23.03 Transitway Lines - Construction - Line Equipment / Structures	\$ 2,203,482	\$ 3,696,690
133-00	New Start - Stops and Terminals	\$12,121,290	\$20,335,381
	13.32.06 Acquisition of Stationary Fare Collection Equipment	\$ 2,253,187	\$ 3,780,078
	13.33.04 Construct Nine Mile park-n-Ride Structure and Related Improvements	\$ 9,868,103	\$ 16,555,303
134-00	New Start - Construct Maintenance Facility	\$16,676,265	\$27,977,071
	13.43.03 Construct Maintenance Facility	\$ 13,988,685	\$ 23,468,231
	13.42.20 Acquire Miscellaneous Equipment	\$ 2,687,580	\$ 4,508,840
137-00	New Start - Right of Way Acquisition	\$31,949,564	\$53,600,444
	13.75.91 Acquisition of Land for Maintenance Facility	\$ 6,133,325	\$ 10,289,622
	13.75.91 Acquire Right of Way for LRT	\$ 19,585,857	\$ 32,858,371
	13.75.91 Dry Creek Parking Easement	\$ 2,146,113	\$ 3,600,444
	13.75.94 Appraisals	\$ 80,459	\$ 134,983
	13.76.92 Relocation	\$ 4,003,810	\$ 6,717,024
137-01	New Start - Other Capital Items	\$28,577,466	\$47,943,217
	13.41.02 Design - Maintenance Facility	\$ 801,942	\$ 1,345,384
	13.71.03 3rd Party Contract - Project Management	\$ 14,257,617	\$ 23,919,406
	13.72.02 Force Account - Final Design	\$ 1,788,207	\$ 3,000,000
	13.72.03 Force Account - Project Management	\$ 7,699,642	\$ 12,917,367
	13.76.95 Utility Relocation (Early)	\$ 2,470,742	\$ 4,145,060
	51.02.06 PMO Reviews	\$ 1,559,317	\$ 2,616,000
		\$521,545,484	\$874,975,000

Estimated Total Eligible Cost:	\$ 874,975,000
Federal Share:	\$ 521,545,484
Local Share:	\$ 353,429,516

Table 2A
No Federal Funds Are Awarded at the Time of FFGA Approval

The Control Totals for the Amendment in "Project Information are Federal: 0 Local: 874,975,000 Total: 874,975,000

SCOPE	DESCRIPTION		
		Federal	Total
131-00	New Start - Purchase New Revenue Rolling Stock and Related Equipment	0	\$106,809,994
	13.13.20 New Accessible LRT Cars and Related Equipment for Expansion	0 \$	106,809,994
132-00	New Start - Design / Build Contract	0	\$614,612,203
	13.21.20 Transitway Lines - Eng/Design - Final Design	0 \$	69,524,080
	13.23.03 Transitway Lines - Construction - Line / Structures	0 \$	331,472,890
	13.33.02 Station Stops/Terminals - Construction of 13 Stations	0 \$	94,991,413
	13.53.20 Electrification - Construction	0 \$	48,277,841
	13.63.20 Communications and Train Control - Construction	0 \$	52,444,508
	13.76.95 Utility Relocation	0 \$	17,901,471
132-01	New Start - Central Corridor Upgrades	0	\$3,696,690
	13.23.03 Transitway Lines - Construction - Line Equipment / Structures	0 \$	3,696,690
133-00	New Start - Stops and Terminals	0	\$20,335,381
	13.32.06 Acquisition of Stationary Fare Collection Equipment	0 \$	3,780,078
	13.33.04 Construct Nine Mile parkn-Ride Structure and Related Improvements	0 \$	16,555,303
134-00	New Start - Construct Maintenance Facility	0	\$27,977,071
	13.43.03 Construct Maintenance Facility	0 \$	23,468,231
	13.42.20 Acquire Miscellaneous Equipment	0 \$	4,508,840
137-00	New Start - Right of Way Acquisition	0	\$53,600,444
	13.75.91 Acquisition of Land for Maintenance Facility	0 \$	10,289,622
	13.75.91 Acquire Right of Way for LRT	0 \$	32,858,371
	13.75.91 Dry Creek Parking Easement	0 \$	3,600,444
	13.75.94 Appraisals	0 \$	134,983
	13.76.92 Relocation	0 \$	6,717,024
137-01	New Start - Other Capital Items	0	\$47,943,217
	13.41.02 Design - Maintenance Facility	0 \$	1,345,384
	13.71.03 3rd Party Contract - Project Management	0 \$	23,919,406
	13.72.02 Force Account - Final Design	0 \$	3,000,000
	13.72.03 Force Account - Project Management	0 \$	12,917,367
	13.76.95 Utility Relocation (Early)	0 \$	4,145,060
	51.02.06 PMO Reviews	0 \$	2,616,000
		0	\$874,975,000

Estimated Total Eligible Cost:	\$	874,975,000
Federal Share:	\$	-
Local Share:	\$	874,975,000

Table 2B
Some Funds Are To Be Awarded with Approval of the FFGA

The Control Totals for the Amendment in "Project Information" are Federal: 20,000,000 Local: 854,975,000 Total: 874,975,000

SCOPE	DESCRIPTION	Federal	Total
131-00	New Start - Purchase New Revenue Rolling Stock and Related Equipment	\$0	\$106,809,994
	13.13.20 New Accessible LRT Cars and Related Equipment for Expansion	\$ -	\$ 106,809,994
132-00	New Start - Design / Build Contract	\$0	\$614,612,203
	13.21.20 Transitway Lines - Eng/Design - Final Design	\$ -	\$ 69,524,080
	13.23.03 Transitway Lines - Construction - Line / Structures	\$ -	\$ 331,472,890
	13.33.02 Station Stops/Terminals - Construction of 13 Stations	\$ -	\$ 94,991,413
	13.53.20 Electrification - Construction	\$ -	\$ 48,277,841
	13.63.20 Communications and Train Control - Construction	\$ -	\$ 52,444,508
	13.76.95 Utility Relocation	\$ -	\$ 17,901,471
132-01	New Start - Central Corridor Upgrades	\$0	\$3,696,690
	13.23.03 Transitway Lines - Construction - Line Equipment / Structures	\$ -	\$ 3,696,690
133-00	New Start - Stops and Terminals	\$0	\$20,335,381
	13.32.06 Acquisition of Stationary Fare Collection Equipment	\$ -	\$ 3,780,078
	13.33.04 Construct Nine Mile park-n-Ride Structure and Related Improvements	\$ -	\$ 16,555,303
134-00	New Start - Construct Maintenance Facility	\$0	\$27,977,071
	13.43.03 Construct Maintenance Facility	\$ -	\$ 23,468,231
	13.42.20 Acquire Miscellaneous Equipment	\$ -	\$ 4,508,840
137-00	New Start - Right of Way Acquisition	\$20,000,000	\$53,600,444
	13.75.91 Acquisition of Land for Maintenance Facility	\$ 6,133,501	\$ 10,289,622
	13.75.91 Acquire Right of Way for LRT	\$ 13,866,499	\$ 32,858,371
	13.75.91 Dry Creek Parking Easement	\$ -	\$ 3,600,444
	13.75.94 Appraisals	\$ -	\$ 134,983
	13.76.92 Relocation	\$ -	\$ 6,717,024
137-01	New Start - Other Capital Items	\$0	\$47,943,217
	13.41.02 Design - Maintenance Facility	\$ -	\$ 1,345,384
	13.71.03 3rd Party Contract - Project Management	\$ -	\$ 23,919,406
	13.72.02 Force Account - Final Design	\$ -	\$ 3,000,000
	13.72.03 Force Account - Project Management	\$ -	\$ 12,917,367
	13.76.95 Utility Relocation (Early)	\$ -	\$ 4,145,060
	51.02.06 PMO Reviews	\$ -	\$ 2,616,000
		\$20,000,000	\$874,975,000

Estimated Total Eligible Cost:	\$ 874,975,000
Federal Share:	\$ 20,000,000
Local Share:	\$ 854,975,000

Table 3
An Example Grant Amendment To Provide Annual Funding Increment
after Approval of the FFGA

The Control Totals for the Amendment in "Project Information" are Federal: 50,000,000 Local: <50,000,000>

SCOPE	DESCRIPTION		
		Federal	Total
131-00	New Start - Purchase New Revenue Rolling Stock and Related Equipment	\$0	\$106,809,994
	13.13.20 New Accessible LRT Cars and Related Equipment for Expansion	\$ -	\$ 106,809,994
132-00	New Start - Design / Build Contract	\$ 41,441,150	\$614,612,203
	13.21.20 Transitway Lines - Eng/Design - Final Design	\$ 41,441,150	\$ 69,524,080
	13.23.03 Transitway Lines - Construction - Line / Structures	\$ -	\$ 331,472,890
	13.33.02 Station Stops/Terminals - Construction of 13 Stations	\$ -	\$ 94,991,413
	13.53.20 Electrification - Construction	\$ -	\$ 48,277,841
	13.63.20 Communications and Train Control - Construction	\$ -	\$ 52,444,508
	13.76.95 Utility Relocation	\$ -	\$ 17,901,471
	132-01 New Start - Central Corridor Upgrades	\$ -	\$3,696,690
	13.23.03 Transitway Lines - Construction - Line Equipment / Structures	\$ -	\$ 3,696,690
133-00	New Start - Stops and Terminals	\$ 3,672,639	\$20,335,381
	13.32.06 Acquisition of Stationary Fare Collection Equipment	\$ -	\$ 3,780,078
	13.33.04 Construct Nine Mile park-n-Ride Structure and Related Improvements	\$ 3,672,639	\$ 16,555,303
134-00	New Start - Construct Maintenance Facility	\$ -	\$27,977,071
	13.43.03 Construct Maintenance Facility	\$ -	\$ 23,468,231
	13.42.20 Acquire Miscellaneous Equipment	\$ -	\$ 4,508,840
137-00	New Start - Right of Way Acquisition	\$ 24,084,269	\$53,600,444
	13.75.91 Acquisition of Land for Maintenance Facility	\$ 6,133,501	\$ 10,289,622
	13.75.91 Acquire Right of Way for LRT	\$ 13,866,499	\$ 32,858,371
	13.75.91 Dry Creek Parking Easement	\$ -	\$ 3,600,444
	13.75.94 Appraisals	\$ 80,459	\$ 134,983
	13.76.92 Relocation	\$ 4,003,810	\$ 6,717,024
	137-01 New Start - Other Capital Items	\$ 801,942	\$47,943,217
	13.41.02 Design - Maintenance Facility	\$ 801,942	\$ 1,345,384
	13.71.03 3rd Party Contract - Project Management	\$ -	\$ 23,919,406
	13.72.02 Force Account - Final Design	\$ -	\$ 3,000,000
	13.72.03 Force Account - Project Management	\$ -	\$ 12,917,367
	13.76.95 Utility Relocation (Early)	\$ -	\$ 4,145,060
	51.02.06 PMO Reviews	\$ -	\$ 2,616,000
Total Project Cost		\$70,000,000	\$874,975,000

Estimated Total Eligible Cost:	\$ 874,975,000
Federal Share:	\$ 70,000,000
Local Share:	\$ 804,975,000

Table 4
Example of an Approved Project Budget

DOT**FTA**

**U.S. Department of
Transportation**

Federal Transit Administration

Application for Federal Assistance

Recipient ID:	1136
Recipient Name:	METROPOLITAN TRANSPORTATION AUTHORITY
Project ID:	ST 03-0123-02
Budget Number:	3 - Budget Approved
Project Information:	METRO CORRIDOR LRT

Part 3: Budget

Project Budget

	<u>Quantity</u>	<u>FTA Amount</u>	<u>Tot. Elig. Cost</u>
<u>SCOPE</u>			
132-00 DESIGN BUILD CONTRACT	0	\$0	\$512,331,820
<u>ACTIVITY</u>			
13.21.20 ENG/DESIGN - MISC NEW START EQUIP	0	\$0	\$69,524,080
13.23.03 CONSTRUCT LINE EQ/STRUCTURES	0	\$0	\$271,890,709
13.33.02 CONSTRUCT 13 STATIONS	0	\$0	\$76,004,039
13.53.20 CONSTRUCT MISC ELECT/POWER EQUIPMENT	0	\$0	\$38,627,818
13.63.20 COMMUNICATIONS AND TRAIN CONTROL CONSTRUCTION	0	\$0	\$41,961,628
13.76.95 REAL ESTATE UTILITY RELOCATION	0	\$0	\$14,323,546
<u>SCOPE</u>			
131-00 NEW START - ROLLING STOCK	34	\$0	\$106,809,994
<u>ACTIVITY</u>			
13.13.20 PURCHASE EXP - LRT RAIL CARS	34	\$0	\$106,809,994

Table 4 (continued)

<u>SCOPE</u>			
132-01 CENTRAL CORRIDOR UPGRADES	0	\$0	\$3,696,690
<u>ACTIVITY</u>			
13.23.03 CONSTRUCT LINE EQ/STRUCTURES	0	\$0	\$3,696,690
<u>SCOPE</u>			
133-00 STATION/TERMINALS - NEW START	0	\$0	\$20,335,381
<u>ACTIVITY</u>			
13.32.06 PURCHASE STATIONARY FARE COLL EQUIP	0	\$0	\$3,780,078
13.33.04 CONSTRUCT 9-MILE PARK & RIDE FACILITY	0	\$0	\$16,555,303
<u>SCOPE</u>			
134-00 CONSTRUCT MAINTENANCE FACILITY	0	\$0	\$27,977,071
<u>ACTIVITY</u>			
13.43.03 CONSTRUCT ADMIN/MAINT FACILITY	0	\$0	\$23,468,231
13.42.20 PURCHASE - MISC EQUIPMENT	0	\$0	\$4,508,840
<u>SCOPE</u>			
137-00 RIGHT OF WAY	0	\$2,971,930	\$53,600,444
<u>ACTIVITY</u>			
13.75.91 RIGHT-OF-WAY MAINTENANCE FACILITY	0	\$0	\$10,289,622
13.75.91 RIGHT-OF-WAY LRT	0	\$2,971,930	\$32,858,371
13.75.91 DRY CREEK PARKING EASEMENT	0	\$0	\$3,600,444
13.75.94 RIGHT-OF-WAY APPRAISAL	0	\$0	\$134,983
13.76.92 REAL ESTATE RELOCATION	0	\$0	\$6,717,024
<u>SCOPE</u>			
137-01 OTHER CAPITAL ITEMS - NEW START	0	\$0	\$45,327,217
<u>ACTIVITY</u>			
13.41.02 ENG/DESIGN - MAINTENANCE FACILITY	0	\$0	\$1,345,384
13.71.03 PROJECT MANAGEMENT - 3RD PARTY	0	\$0	\$23,919,406
13.72.02 FORCE ACCT FINAL ENGINEERING	0	\$0	\$3,000,000
13.72.03 FORCE ACCT PROJECT MANAGEMENT	0	\$0	\$12,917,367
13.76.95 REAL ESTATE UTILITY RELOCATION	0	\$0	\$4,145,060

Table 4 (continued)

<u>SCOPE</u>			
132-02 PRELIMINARY ENGINEERING	0	\$3,439,516	\$4,299,395
<u>ACTIVITY</u>			
13.71.01 PRELIMINARY ENGINEERING - 3RD PARTY	0	\$2,639,516	\$3,299,395
13.72.01 FORCE ACCT PRELIMINARY ENGRG	0	\$800,000	\$1,000,000
<u>SCOPE</u>			
137-02 PROJECT CONTINGENCIES	0	\$0	\$104,896,383
<u>ACTIVITY</u>			
13.73.00 CONTINGENCIES	0	\$0	\$104,896,383
Estimated Total Eligible Cost:			** \$879,274,395
Federal Share:			\$6,411,446
Local Share:			\$872,862,949

*** Estimated Total Eligible Cost is greater in Table 4 because of the previous obligation for Preliminary Engineering (Scope 132-02). Tables 1-3 demonstrate Amendment amounts, while Table 4 also shows previous obligations.

CHAPTER V

FULL FUNDING GRANT AGREEMENT: PROJECT IMPLEMENTATION

1. REQUESTS FOR MODIFICATIONS OF FULL FUNDING GRANT AGREEMENTS.

Procedures for requesting amendments and other types of grant modifications are set forth in FTA's "Grant Management Guidelines," Circular 5010.1C. FFGAs are unique, however, in that certain types of modifications—notably, changes in the Scope of a Project, and significant budget revisions—must be reported to the Congress. Moreover, a failure to achieve a Revenue Operations Date constitutes a breach of a material term of an FFGA, which is subject to strict scrutiny and may be waived only by the Federal Transit Administrator or his or her designee. This chapter summarizes how FTA's general procedures for grant amendments and modifications are applied to FFGAs, and introduces certain special procedures applicable only to FFGAs.

- a. Adding Funds to the Maximum FTA Amount Awarded. Rarely will the total Maximum FTA Amount Awarded for a Project be provided upon award of an FFGA. Rather, a portion of the funds is initially provided and additional funds are provided in succeeding years—as the Congress appropriates those funds—until the total of the Maximum FTA Funds Awarded is ultimately awarded. These funding increments are provided by adding funding amendments to the FFGA.

The Grantee should submit its request for an annual increment of funds to its FTA Regional Office together with all grant application documentation as required to update its original application and support a new award of Federal funds. The increment will be processed as a grant amendment in FTA's electronic management and award system, TEAM Web. Chapter IV of this circular describes the procedures for using TEAM Web to apply for awards of funds and make changes to the Approved Project Budget and the Control Totals.

The addition of funds as anticipated when the FFGA was awarded does not require any modification to the text of the FFGA.

So long as there are no substantive changes, the document may consist of: (1) the first two pages of the Full Funding Agreement modified to reflect the revised amounts, and (2) if FTA has revised the Master Agreement since the last award of funds under the FFGA, the date and agreement number of the new Master Agreement, which is incorporated into the FFGA. In addition, the Approved Project Budget must be modified.

- b. Changes in the Scope of the Project. As noted in Chapter III, Attachment 1 to an FFGA, Scope of the Project, is a brief narrative statement of the purpose and objective of the Project, an explanation of its key elements, and a summary of its basic operational functions. Typically, for a fixed guideway project, Attachment 1 identifies

the Project location, guideway length, mode of transit, the number and type of stations, the approximate number of vehicles, the location and type of maintenance facilities, and the pertinent communication and control systems. In sum, Attachment 1, Scope of the Project, describes what the Grantee will deliver in exchange for its receipt of Federal financial assistance.

Any change to the Scope of the Project as stated in an Attachment 1 is deemed a major modification of the FFGA; thus, it would require a formal amendment of the FFGA in accordance with the procedures set forth in FTA Circular 5010.1C. Moreover, in recent annual USDOT appropriations acts the Congress has directed FTA to inform the transportation subcommittees of the House and Senate Committees on Appropriations before approving a change in the scope of any Project under an FFGA. Before so notifying the House and Senate subcommittees, FTA requires its Financial Management Oversight contractor (FMOC) to reassess the Grantee's ability to finance completion of the Project. The FMOC's report to FTA is included with FTA's notification to the House and Senate subcommittees.

- c. Changes in Project Description. As noted in Chapter III, Attachment 2 to an FFGA identifies and describes with specificity each of the discrete activities necessary to accomplish the stated purpose, objective, and transportation functions of a Project. Each Project activity identified in Attachment 2 is ascribed to an individual contract unit. Thus, the level of detail set forth in an Attachment 2, Project Description, is greater than that presented in the Scope of the Project, Attachment 1. The general procedures of FTA Circular 5010.1C do not apply to changes in the Project Description for the FFGAs. Rather, FTA applies the following principles to requests for modifications to the Project Description, Attachment 2:
- (1) No Change in Scope: A modification of the Project Description that does not change the Scope of the Project need not be submitted as a formal or administrative amendment to the FFGA. If FTA approves the modification it will be documented by an addendum to Attachment 2.
 - (2) Reduction in Scope, Improvements or Benefits: A modification of the Project Description that reduces the Scope of the Project, significantly reduces the transportation improvements the Grantee was obliged to deliver, or significantly reduces the expected benefits of the Project may result in a reduction of the amount of the Maximum Federal New Starts Financial Contribution, as FTA deems appropriate.
 - (3) Increase in Scope. A modification of the Project Description that expands the Scope of the Project requires an amendment to the FFGA.
 - (4) Significant Increase in Estimated Net Project Cost: FTA will not approve a modification of the Project Description that represents a significant increase in the Estimated Net Project Cost unless the Grantee demonstrates that additional local funding is available to cover the increased cost.

- d. Changes in Costs or Budget. As noted in Chapter III, the Baseline Cost Estimate is a critical tool for project oversight; it enables FTA and its Project Management Oversight contractor (PMOC) to monitor Project costs throughout design and construction by comparing the Grantee's actual expenditures to the costs as originally estimated. FTA does not allow any modification of Attachment 3 to an FFGA, the Baseline Cost Estimate. Nevertheless, if actual costs prove to be less than estimated costs, the Federal and local share would decrease proportionately. However, the Approved Project Budget can be revised several times during design and construction to record budgetary changes, which do not constitute a change in the overall scope, as the Project moves toward completion. The procedures for amending or revising an Approved Project Budget are set forth in FTA Circular 5010.1C, and Chapter IV of this circular addresses the entry of budgetary changes into TEAM Web.
- e. Changes in Schedule or Revenue Operations Date. Routinely, a Grantee may adjust its own internal scheduling as a Project moves through design and construction toward completion. However, FTA does not allow any modification to Attachment 4 to an FFGA, the Baseline Schedule. Like the Baseline Cost Estimate, the Baseline Schedule is a means for FTA and its Project Management Oversight contractor to compare planned Project implementation to actual performance. Specifically, the Baseline Schedule is a tool for tracking the major milestones in construction and the critical path toward the Revenue Operations Date.

Pursuant to Section 5 of an FFGA (Revenue Operations Date), a Grantee's failure to achieve the operational functions of its Project on or before the Revenue Operations Date will constitute a breach of the FFGA. The FFGA strictly limits the circumstances under which FTA may waive such a breach and allow an extension of the Revenue Operations Date. Specifically, as grounds to request an extension of a Revenue Operations Date, a Grantee must demonstrate that:

- (1) the need for a waiver of the breach and an extension of the Revenue Operations Date is the direct result of events or circumstances beyond the Grantee's control; and
- (2) the delay in the Revenue Operations Date is unavoidable despite the Grantee's best efforts to minimize the negative effects of the events or circumstances on the Baseline Schedule.

Also, by its terms, an FFGA allows FTA to extend a Revenue Operations Date in instances in which FTA determines that the Federal Government's interests would best be served through an extension of that date. In no instance, however, will a delay in appropriations of Federal funds by the Congress constitute a basis for extension of a Revenue Operations Date. (See Section 5(c) of the model FFGA.)

In no instance will FTA's consent to extend a Revenue Operations Date constitute a basis for Federal financial assistance beyond the Maximum Federal New Starts Financial Contribution established by the FFGA. And in all cases in which an extension is allowed, the Grantee must provide FTA a revised schedule for Project

completion that demonstrates the feasibility of achieving the extended Revenue Operations Date.

An obvious example of an event beyond a Grantee's control is a disaster attributable entirely to forces of nature that could not reasonably have been prevented. Similarly, unforeseen site conditions affecting construction could be considered beyond a Grantee's control if those conditions differ materially from those ordinarily encountered in construction and if the Grantee had made reasonable efforts to assess the site conditions prior to execution of the FFGA. Delays in schedule attributable to contracting claims and disputes with vendors are typical to any major construction project; thus, they would not generally be deemed a basis for extension of a Revenue Operations Date.

In some instances, implementation of portions of a Project may be under the control of a third party. For example, a highway agency may be responsible for construction of ramps or bridges integral to an exclusive bus lane, or an airport sponsor may be responsible for construction of transit facilities and equipment on airport property. In requesting a waiver of breach and an extension of a Revenue Operations Date for these types of projects, a Grantee must demonstrate it has taken all reasonable and necessary measures within its power to ensure adherence to the Baseline Schedule, including assistance to the responsible third party, for the purpose of minimizing the causes of delay. In assessing the Grantee's efforts, FTA will consider the prudence of delaying Project activities within the Grantee's control that are functionally dependent upon completion of activities under third party control. In the example of an exclusive bus lane, for instance, it might be deemed prudent to delay construction of a park-and-ride lot adjacent to the bus lane if completion of the bus lane will be delayed.

FTA will give the Grantee written notice of its decision whether to extend a Revenue Operations Date. A written decision waiving the Grantee's breach of the FFGA and extending the Revenue Operations Date is deemed an addendum to the FFGA as of the date that decision is rendered.

No further modification of the FFGA is necessary. When an amendment to the grant is next processed the new Revenue Operations Date should be reflected. For TEAM Web, FTA will add the new Revenue Operations Date to the Conditions of Award. The waiver will remain in effect until the date of the extended Revenue Operations Date.

- f. Changes in Environmental Mitigation. As noted in Chapter 3, Attachment 7 to an FFGA, Measures to Mitigate Environmental Impacts, sets forth the mitigation measures identified in FTA's environmental Record of Decision or Finding of No Significant Impact for a Project. A Grantee may not withdraw or substantially change any of the mitigation measures identified in Attachment 7 without FTA's prior approval. Moreover, any change in a Project that may adversely affect the community or the natural environment or alter the adopted mitigation measures in a manner different from what was presented to the public in the FEIS or EA for the Project may

be made only in accordance with the joint FTA/FHWA environmental rule at 23 C.F.R. Part 771. Should FTA approve any changes in environmental mitigation for the Project, FTA will revise Attachment 7 accordingly, so that the Attachment continues to assist FTA, its PMOC, and the Grantee in monitoring implementation of the Grantee's commitments for mitigation.

2. NOTICE REQUIREMENTS. In addition to the notice requirements governing all FTA grant agreements, an FFGA requires the Grantee to give FTA immediate notice of certain events and circumstances particular to a Project under an FFGA. These are summarized below. These notices should be submitted to the appropriate FTA Regional Office.

- a. Financing Plan. Sections 10 and 12 of an FFGA (Local Financial Commitment—Capital Costs and Local Financial Commitment—Operating and Maintenance Costs, respectively) require the Grantee to notify FTA of any change of circumstances or commitments that will adversely affect the Grantee's Financing Plan for the Project. In its notice, the Grantee should describe both the changed circumstances or commitments and its plans to overcome the adversity and ensure adequate funding resources.

Also, the Grantee should reaffirm its assurances to fulfill its capital or operating funding commitments, as appropriate. The specific assurances necessary with respect to capital financing are those set forth at Section 10(b) of the FFGA; the specific assurances necessary with respect to operation and maintenance financing are those set forth at Section 12(b) of the FFGA.

A change in circumstances or commitments adversely affecting the Grantee's financing plan would include any fact or circumstance that negatively affects the amount or dependability of the Grantee's funding sources. For example, a lawsuit threatening the establishment of a local benefits assessment district or challenging the validity of a tax levy or municipal bond issuance would trigger the requirement for notice to FTA if any of those funding sources were integral to the Grantee's financing plan.

- b. Baseline Schedule. Pursuant to Section 14(b) of an FFGA (Baseline Schedule), the Grantee must notify FTA of any modification of schedule that has the potential to affect the Revenue Operations Date. In its notice, the Grantee should describe both the effects of the delay on the Baseline Schedule and the steps the Grantee intends to take to recover the slippage in schedule.
3. PROJECT MANAGEMENT OVERSIGHT. Section 15 of the FFGA confirms that the Grantee's Project is governed by FTA's Project Management Oversight rule at 49 C.F.R. Part 633. Subpart B of the rule addresses FTA's use of Project Management Oversight Contractors (PMOCs) to perform monitoring and oversight services on FTA's major capital investments. In deploying its Project Management Oversight Contractors, FTA gives priority to new starts projects under Full Funding Grant Agreements.

FTA relies on the PMOCs as an important source of information and advice on the most challenging and expensive projects in which FTA makes investments. FTA expects a Grantee to give a PMOC its full cooperation in that PMOC's oversight of the Grantee's Project, in keeping with both the letter and spirit of the Project Management Oversight rule. FTA relies heavily on the timeliness and accuracy of the monthly, quarterly, and "spot" reports a PMOC produces while monitoring Project implementation, and, as appropriate, FTA will provide copies of those reports to the Grantee. Moreover, FTA expects its PMOC to fully participate in every quarterly review FTA conducts on a major capital investment, and to constantly monitor the efficacy of the Grantee's Project Management Plan, its rail and bus fleet management plans, safety and security management plan, quality assurance and quality control plans, and its program for value engineering.

In no sense, however, do the activities of a PMOC negate or diminish the Grantee's duties and responsibilities to manage the Project. Rather, an optimal relationship between a Grantee and a PMOC is one in which a Grantee will value a PMOC's constructive advice and criticism as well as the PMOC's independent, objective view of the progress on a Project.

Pursuant to Section 15 of the FFGA, a Grantee's noncompliance with the Project Management Oversight regulation constitutes a breach of the FFGA unless FTA formally waives the requirements that have been violated.

4. THIRD PARTY CONTRACTING. "Third party contracting" or "third party procurement" refers to any acquisition of services or Project property using Federal financial assistance awarded by FTA. In conducting their procurements, Grantees must comply with the requirements of FTA Circular 4220.1D, "Third Party Contracting Requirements," dated 4-15-96, as amended by Change 1. Among other things, the FTA circular includes the general procurement requirements of DOT's Common Rule, 49 C.F.R. Part 18; a prohibition against the use of FTA grant or loan funds to support exclusionary or discriminatory specifications (including state and local preferences); and special provisions for procuring rolling stock, and architectural and engineering services. FTA Circular 4220.1D and Change 1 may be viewed on FTA's website at <http://www.fta.dot.gov/library/policy/tpcr.html> and <http://www.fta.dot.gov/library/policy/tpcrpc.htm>, respectively.
5. ADMINISTRATION OF REAL PROPERTY. FTA's new starts projects require a Property Acquisition Plan that, among other project management elements, identifies the real property needed for the project. The Property Acquisition Plan is a part of the Project Management Plan. All real property to be used in a federally financed project must be acquired in compliance with 49 CFR Part 24, the implementing regulations for the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended to date. These regulations may be viewed on FTA's website at [\[http://www.fta.dot.gov/office/program/re.htm\]](http://www.fta.dot.gov/office/program/re.htm).

Real property should not be acquired prior to the project's having received a Categorical Exclusion, Finding of No Significant Impact, or environmental Record of Decision, and

should not be acquired unless the Project has been included in the Metropolitan Planning Organization's Transportation Plan and Transportation Improvement Program in accordance with 23 CFR Part 450. Any significant change of design after issuance of the Categorical Exclusion, Finding of No Significant Impact, or environmental Record of Decision requires FTA's concurrence. FTA will determine the environmental effects the change may have on the project in accordance with 23 CFR Part 771.

6. PROPERTY MANAGEMENT. FTA Circular 5010.1C, "Grant Management Guidelines," Chapter II, provides guidance on the acquisition, use (including incidental use), and disposition of project real property and equipment.

APPENDIX A

ACRONYMS AND DEFINITIONS

Alternatives Analysis:	A corridor level analysis of all reasonable mode and alignment alternatives for addressing a transportation problem. An alternatives analysis leads to selection of a locally preferred alternative by the appropriate State and local agency officials through a process open to the public.
Anticipated Maximum FTA Funds:	Reflects the sum total of the Maximum Federal New Starts Financial Contribution and the Estimated Contributions From Other Federal Sources.
Application:	All documents and written submissions filed by or on behalf of an applicant for a Full Funding Grant Agreement and accepted by FTA in satisfaction of the legal and policy requirements for grant award. An Application includes all explanatory, supporting, and supplementary documents relating to the Project that FTA relied upon in making a determination to obligate and award Federal funds for the Project.
Baseline Cost Estimate:	The total of all estimated costs to complete a Project at the time FTA and a Grantee enter into a Full Funding Grant Agreement. A Baseline Cost Estimate is derived from the cost estimates of the individual third party contracts and force account work that, in sum, constitute the Project. (Force account work and third party contract are defined in Appendix A.) The Baseline Cost Estimate is identified in Attachment 3 to the Full Funding Grant Agreement. A Baseline Cost Estimate reflects appropriate escalation of costs and dates from the Baseline Schedule for the Project, and contains a table showing sources of funding for the Project. It is not modified during construction or implementation of the Project. See Attachment 3 in Appendix B for an example.
CMAQ:	Congestion Mitigation and Air Quality Improvement program, authorized by 23 U.S.C. § 149. In certain instances, CMAQ funds may be expended to assist design and construction of a new starts project.

Commitment Authority:	The amount of funding authorized by Federal law for new starts projects. In TEA-21, the commitment authority for new starts is equivalent to the guaranteed new starts annual level of funding over the authorization period plus three additional years.
DEIS:	Draft Environmental Impact Statement.
EA:	Environmental Assessment. An EA is an environmental review performed jointly by the grantee and FTA that assists FTA in deciding whether the proposed project is a major Federal action significantly affecting the human environment. If FTA decides that it is, an EIS is required. If FTA decides that it is not, FTA issues a FONSI (see FONSI).
Environmental ROD:	Environmental Record of Decision. FTA's issuance of an environmental ROD represents completion of compliance with NEPA and Section 4(f).
EIS:	Environmental Impact Statement.
Estimated Net Project Cost:	In accordance with 49 U.S.C. § 5309(h), FTA is required to estimate the portion of the cost of a Project that reasonably cannot be financed from a grant recipient's own revenues; that portion is then eligible for Federal financial assistance. Thus, the Estimated Net Project Cost of a Project under an FFGA is that portion of the Baseline Cost Estimate that FTA estimates reasonably cannot be financed from the Grantee's revenues. Often, the Estimated Net Project Cost, the Estimated Total Project Cost, and the Baseline Cost Estimate will be the same amount.
Estimated Contributions From Other Federal Sources:	Funds from Federal sources other than Section 5309 new starts may be made available to help finance the Estimated Net Project Cost. Most notably, Grantees may seek to apply funds transferred from the Federal Highway Administration under the Surface Transportation Program (STP) or the Congestion Mitigation and Air Quality (CMAQ) Improvement Program to help finance their Projects. Grantees with existing fixed guideway systems may apply their Section 5309 fixed guideway modernization funding to defray certain types of Project costs. In addition, a Grantee may apply its Section 5307

Urbanized Area Formula Program funds toward the costs of a Project.

Estimated Total Project Cost:	Reflects the total anticipated costs of the Project at the time of the FFGA award; usually, it will be the same amount as the Baseline Cost Estimate (BCE). Occasionally, a Grantee will choose to pursue activities or pay for items within the Project scope of work that are not eligible for Federal reimbursement; in that instance, the Estimated Total Project Cost will be larger than the BCE.
FEIS:	Final Environmental Impact Statement.
FFGA:	Full Funding Grant Agreement. An FFGA is an instrument that defines the scope of a Project, the Federal financial contribution to that Project, and other terms and conditions.
Final Design:	The final phase of project development, which includes (but is not limited to) preparation of final construction and construction management plans, detailed specifications, construction cost estimates, and bid documents.
Financing Plan:	The plan submitted in support of an application for a Full Funding Grant Agreement, which describes the Grantee's financial condition and demonstrates the Grantee's capacity to construct, operate, and maintain the Project together with its existing transit system. A Financing Plan includes all explanatory, supporting, and supplementary documents, commitments, and agreements accepted or approved by FTA.
Fiscal Year:	The Federal Fiscal Year, which begins October 1 and ends September 30.
FMOC:	Financial Management Oversight Contractor. FTA retains an FMOC to evaluate a Grantee's financial condition and its ability to construct, operate, and maintain a Project.
FONSI:	Finding of No Significant Impact. FTA's issuance of a FONSI represents compliance with the requirements of NEPA and, if applicable, Section 4(f). (See EA.)
Force Account Work	FTA Circular 5010.1C, "Grant Management Guidelines" defines force account work as: "work other than grant or

project administration that is included in an approved grant and performed by a grantee's own labor forces.” Force account work may consist of design, construction, refurbishment, and inspection, and construction management activities, if eligible for reimbursement under the grant. Incremental labor costs from flagging protection, service diversions or other activities directly related to the capital grant may also be defined as force account work. Force account work does not include grant or project administration activities that are otherwise direct project costs. Force account also does not include work on rolling stock that is not a major capital project.

Government:	The United States of America acting by and through the Federal Transit Administration of the United States Department of Transportation.
ISTEA:	The Intermodal Surface Transportation Efficiency Act of 1991, Public Law 102-240.
Local Share:	A Grantee’s contractually required share of the Net Project Cost.
Master Agreement:	The set of standard terms and conditions that govern any type of project for which FTA provides Federal financial assistance. FTA revises and publishes the Master Agreement once a year. It is incorporated by reference into the Full Funding Grant Agreement.
Maximum Federal New Starts Financial Contribution:	Denotes the limit on the amount of Section 5309 new starts funds that will ever be made available for the Project. The Section 5309 new starts fund is the only source of funding for which the total amount is explicitly limited upon award of the FFGA by the terms and conditions of the Agreement.
Maximum New Starts Amount Awarded:	Identifies the total amount of Section 5309 new starts funds awarded for a Project as of a date certain. Usually, the term is used in conjunction with the words “prior to this amendment,” or “with this amendment,” or “total, including this amendment.” Specifically, “Maximum New Starts Amount Awarded Prior to this Amendment” means the amount of Section 5309 funds that have been awarded prior to the date of the FFGA amendment at hand; “Maximum New Starts Amount Awarded With This

Amendment” means the amount of Section 5309 new starts funds awarded under the FFGA amendment at hand; and “Maximum New Starts Amount Awarded Total, Including This Amendment” means the sum total of the Section 5309 new starts funds awarded prior to the FFGA amendment at hand and the Section 5309 new starts funds awarded under the amendment at hand.

Maximum FTA Amount Awarded: Identifies the total amount of Federal funds from all sources administered by FTA and awarded for the Project, regardless of source, and available to the Grantee, including those funds transferred from FHWA (e.g., STP and CMAQ), as of a date certain. Usually, the term is used in conjunction with the words “prior to this amendment,” or “with this amendment,” or “total, including this amendment” (see “Maximum New Starts Amount Awarded”). The Maximum FTA Amount Awarded upon the execution of a Full Funding Grant Agreement is set forth in the first page of the Full Funding Grant Agreement.

Maximum Percentage of New Starts Participation: Denotes the portion of project costs which the Section 5309 new starts funds will support. Specifically, the Maximum Percentage of New Starts Participation is calculated by dividing the Maximum Federal New Starts Contribution by that portion of the Estimated Net Project Cost that will be financed by Section 5309 new starts funds.

Maximum Percentage(s) of FTA Participation: Reflects the maximum percentage of FTA participation in the Estimated Net Project Cost for each Federal funding source for the Project. FTA determines the maximum percentage that is appropriate for each Federal funding source. FTA calculates these amounts by comparing each of the Estimated Contributions From Other Federal Sources with the portion of the Estimated Net Project Cost to be financed by that source of funding. The Grantee must not exceed the percentage limitation for the particular funding source at issue.

MPO: Metropolitan Planning Organization.

NEPA: National Environmental Policy Act of 1969, as amended, 42 U.S.C. §§ 4321 *et seq.*

New Starts Project:	A new fixed guideway system or an extension to an existing fixed guideway system. A “new starts project” is referenced as a potential “major capital investment” by FTA in the context of FTA’s rule at 49 C.F.R. Part 611.
New Starts Share:	The New Starts Share of the cost of a Project is calculated by dividing the Maximum Federal New Starts Financial Contribution by the Estimated Net Project Cost.
Overall Federal Share of the Project:	This term is a percentage calculated by dividing the Anticipated Maximum FTA Funds by the Estimated Net Project Cost.
O&M:	Operation and Maintenance.
PMOC:	Project Management Oversight Contractor. A PMOC is retained by FTA to evaluate a Grantee’s technical capacity to build, operate, and maintain a Project, and to monitor the Grantee’s implementation of that Project.
Preliminary Engineering:	The process by which the scope of the proposed project is finalized, estimates of project costs, benefits and impacts are refined, NEPA requirements are completed, project management plans and fleet management plans are further developed, and local funding commitments are in place.
Project:	The entirety of transit and transportation improvements a Grantee commits to implement under a Full Funding Grant Agreement (FFGA). The Scope of the Project and Project Description are set forth in Attachments to the FFGA.
Project Management Plan:	The plan, submitted in support of an application for a Full Funding Grant Agreement, which demonstrates a Grantee’s technical capacity to build, operate, and maintain the Project, together with the Grantee’s existing transit system. A Project Management Plan is an evolving document, first prepared during preliminary engineering, which follows a Project through final design, construction, and revenue operations.
Revenue Operations Date:	The date certain upon which a Grantee commits to begin revenue operations for a Project. A Revenue Operations Date is established in the Full Funding Grant Agreement for each Project.

Section 4(f):	Section 4(f) of the Department of Transportation Act of 1966, as amended, 49 U.S.C. § 303, concerning public parklands, wildlife and waterfowl refuges, and historic sites.
Section 106:	Section 106 of the National Historic Preservation Act of 1966, as amended, 16 U.S.C. § 470f.
STP:	Surface Transportation Program, authorized by 23 U.S.C. § 133. In certain instances, STP funds may be expended to assist design and construction of a new start project.
TEA-21:	The Transportation Equity Act for the 21 st Century, Public Law 105-178; June 9, 1998, as amended by the TEA-21 Restoration Act, Pub. L. No. 105-206, June 22, 1998. .
Third Party Contract	FTA Circular 4220.1D, "Third Party Contracting Requirements," states that: "'Third party contract' refers to any purchase order or contract awarded by a grantee to a vendor or contractor using Federal financial assistance awarded by FTA."
Total Eligible Cost:	FTA uses the umbrella term "Total Eligible Cost" to designate the basis upon which FTA determines the amount of Federal funding that may be awarded. Among the types of "Total Eligible Cost" are (1) "Net Project Cost," as defined by 49 U.S.C. § 5302(a)(8); (2) cost provisions of other Federal statutes, such as Title 23, U.S. Code; and (3) funding determinations established at FTA's discretion. Note that funding for an FFGA is always based on the "Net Project Cost" as defined by 49 U.S.C. § 5302(a)(8). Accordingly, the term "Total Eligible Cost" will not usually appear in the typewritten (paper) FFGA document, but typically appears in TEAM Web entries pertaining to the FFGA.
USDOL:	United States Department of Labor.
USDOT:	United States Department of Transportation.
YOE:	Year of Expenditure.

APPENDIX B

MODEL FULL FUNDING GRANT AGREEMENT
AND EXAMPLES OF ATTACHMENTS

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION
WASHINGTON, D.C. 20590**

FULL FUNDING GRANT AGREEMENT

**[NAME OF THE GRANTEE]
[PROJECT TITLE]
[PROJECT NUMBERS]**

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**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION**

**FULL FUNDING GRANT AGREEMENT
(FTA FFGA-_, October 1, 200_)**

On the date the authorized U.S. Department of Transportation, Federal Transit Administration (FTA) official signs this Full Funding Grant Agreement, the Government (FTA) has Awarded Federal assistance in support of the Project described below. Upon Execution of this Full Funding Grant Agreement by the Grantee named below, the Grantee affirms this Award by the Government (FTA Award), and enters into this Full Funding Grant Agreement with FTA. The following documents are incorporated by reference and made part of this Full Funding Grant Agreement:

- (1) "Federal Transit Administration Master Agreement," FTA MA(), October 1, 200_, [http://www.fta.dot.gov/library/legal/agreements/200_/ma.html]; and
- (2) Any Award notification containing special conditions or requirements, if issued.

FTA AWARD

The Government (FTA) hereby awards a Full Funding Grant as follows:

Project Number(s):

Grantee:

Citation of Statutes Authorizing the Project: 49 U.S.C. §§ 5309(a)(1), 5309(e)(7)

Estimated Net Project Cost:

Maximum FTA Amount Awarded [Including This Amendment]:

Amount of This FTA Award:

Maximum Federal New Starts Financial Contribution:

Maximum Percentages of FTA Participation:

Maximum Percentages of New Starts Participation:

Dates of U.S. Department of Labor Certifications of Transit Employee Protective Arrangements:

Original Project
(or Amendment)
Numbers

Certification Dates

Revenue Operations Date:

Project Description: *[Set forth a one-paragraph synopsis of the Project. Include the following last sentence: For a more detailed description, see Attachments 1 and 2 to the Full Funding Grant Agreement.]*

**UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL TRANSIT ADMINISTRATION**

FULL FUNDING GRANT AGREEMENT TERMS AND CONDITIONS

THIS FEDERAL TRANSIT ADMINISTRATION FULL FUNDING GRANT

AGREEMENT (Agreement) is entered into by the _____ (1)
(Grantee) and the United States of America, acting through the United States Department of Transportation, Federal Transit Administration (FTA or Government).

WHEREAS, the Grantee has determined through its local planning process that construction and/or acquisition of _____ (2a) (hereafter, the “Project”) will effectively and efficiently serve transportation needs of metropolitan _____ (2b).

WHEREAS, the Grantee has developed a Financing Plan, as herein defined, using a combination of local, state, and Federal funds to finance the costs of the Project and, in accordance with its plan, has requested a Grant, as herein defined, of Federal financial assistance in the Project.

WHEREAS, the Government has previously provided \$ _____ (3a) in capital new starts funds, \$ _____ (3b) in capital fixed guideway modernization funds, \$ _____ (3c) in formula funds, \$ _____ (3d) in Surface Transportation Program (STP) funds, and \$ _____ (3e) in Congestion Mitigation/Air Quality (CMAQ) funds for development of the Project.

WHEREAS, the Government has determined to enter into this Agreement and to support final design and construction of the Project up to a Maximum Federal New Starts Financial Contribution of \$ _____ (4) in capital new starts funds, subject to all the terms and conditions set forth in this Agreement.

WHEREAS, the Grantee has submitted its request for Federal assistance (the Application) and the Government has received and is relying upon the Grantee’s assurances, certifications, and all other documents required as conditions precedent to a Grant of assistance by the Government for the Project; and, in its submissions, the Grantee has demonstrated justification for the Project, has demonstrated its financial, organizational, and technical capacity as is necessary to complete the Project within the maximum amount of Federal assistance set forth in this Agreement, and has demonstrated the capability to secure non-Federal funds as may be necessary for such completion.

WHEREAS, the Government has determined that the Project is based on the results of an alternatives analysis and preliminary engineering; is justified based on a comprehensive review of its mobility improvements, environmental benefits, cost effectiveness, and operating

efficiencies; and is supported by an acceptable degree of local financial commitment, including evidence of stable and dependable financing sources to construct, maintain, and operate the Project.

WHEREAS, the Government and the Grantee have agreed that their respective duties and responsibilities as related to the completion of the Project shall be determined by and under the terms and conditions of this Agreement and have agreed that this Agreement shall be recognized as the sole understanding between the Government and the Grantee in consideration of the mutual promises as set forth in this Agreement.

THEREFORE, in consideration of the above and the parties' mutual promises as set forth in this Federal Transit Administration Full Funding Grant Agreement, the Grantee and the Government agree to the specific terms, conditions and provisions set forth in this entire Agreement including, in particular, the specific terms of the following Sections and Attachments:

SECTION 1. DEFINITIONS

"Agreement" means this Federal Transit Administration Full Funding Grant Agreement (FFGA) and consists of all parts and documents listed in Section 20 of this Agreement, "Contents of Agreement," and will include all future addenda, substitutions, modifications and amendments as and when legally executed and effective. (This definition supersedes the definition of "Grant Agreement" set forth in Section 1.j of the Federal Transit Administration Master Agreement (Master Agreement), incorporated by reference and made part of this Agreement.)

"Application" means those documents and written submissions filed by or on behalf of the Grantee pursuant to its request for Federal financial assistance for support of the Project and relied upon by the Government as satisfaction of the legal and policy requirements of Grant award. The Application includes all explanatory, supporting, or supplementary documents related to the Project that the Government relied upon in its determination to obligate and award Federal funds for the Project. (This definition is intended to supplement the definition "Application" set forth in Section 1.a of the Master Agreement, incorporated by reference and made part of this Agreement.)

"Baseline Cost Estimate" means the Application document described in Section 13 of this Agreement and set forth in Attachment 3. The requirements of the Baseline Cost Estimate are set forth in FTA Circular 5200.1A, "Full Funding Grant Agreement Guidance." The Baseline Cost Estimate reflects the total anticipated cost of the Project as of the Date of this Agreement.

"Complete the Project" means to accomplish all of the scope and activities of the Project as described in Attachment 1, "Scope of the Project," and Attachment 2, "Project Description."

"Date of this Agreement" means the date the Government awards this Full Funding Grant Agreement.

"Estimated Net Project Cost" means the amount that is calculated by subtracting the cost that can reasonably be financed from the Grantee's revenue from the total anticipated cost of the Project as reflected in the "Baseline Cost Estimate," Attachment 3 to this Agreement. The Estimated Net Project Cost is set forth in Section 7 of this Agreement.

"Financing Plan" means the plan accepted by the Government as part of the Application process describing the Grantee's financial condition and capability to Complete the Project and to maintain and operate the Project together with its existing transit system. It includes all explanatory, supporting and supplementary documents, commitments, and agreements accepted or approved by the Government.

"Government" means the United States of America, acting through the Federal Transit Administration of the United States Department of Transportation.

"Grantee" means _____(5)_____ [*identify the Grantee by name*].

"Grant(s)" means, in singular and plural forms, the obligation and award of Federal financial assistance by the Government pursuant to the laws codified at 49 U.S.C. Chapter 53.

"Local Share" means that portion of the Grantee's local financial commitment that is the Grantee's legally required share of the Net Project Cost.

"Master Agreement" means the standard terms and conditions applicable to recipients of Federal financial assistance from the Government. It is updated and published annually. It is incorporated by reference and made part of this Agreement and identified in Federal Fiscal Year 200__(6a)__ by FTA Form MA(__(6b)__) (October 1, 200(__(6c)___).

"Maximum Federal New Starts Financial Contribution" means the limit of Federal capital new starts financial participation in the Project. (The amount of the "Maximum Federal New Starts Financial Contribution" is set forth in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment," and is only a portion of the total Federal financial contribution for the Project.)

"Maximum FTA Amount Awarded" means the total amount of Federal funds from all sources administered by FTA and awarded for the Project, regardless of source, and available to the Grantee. (This amount is set forth in the first page of this Agreement.)

"Net Project Cost" means the cost of the Project that cannot reasonably be financed from the Grantee's revenues.

"Project" means the transit/transportation improvements the Grantee has promised to implement as a condition of its Full Funding Grant. A description of the Project is set forth in Attachment 1, "Scope of the Project." Activities to carry out the project scope are set forth in Attachment 2, "Project Description."

"Project Costs" means all costs eligible for Federal financial participation under the terms of this Agreement and consistent with the cost principles set forth in Section 9 of the Master Agreement, "Payments."

"Revenue Operations Date" means the date certain upon which the Grantee shall commence revenue operations of the Project as defined in Section 5 of this Agreement.

SECTION 2. PURPOSES OF AGREEMENT

Pursuant to 49 U.S.C. § 5309, the purposes of this Agreement are to:

- (a) provide Federal financial assistance to the Grantee in the form of this Full Funding Grant and possible future Grants as is and may be awarded under this Agreement and under the laws codified by 49 U.S.C. Chapter 53 for purposes that are consistent with those statutes, implementing regulations, and other applicable laws and regulations;
- (b) describe the Project and set forth the mutual understandings, terms, conditions, rights and obligations of the parties related to implementing the Project, the future management and operation of the Project, and the manner in which Project real property and equipment will be used;
- (c) establish the Maximum Federal New Starts Financial Contribution for the Project, and the manner in which all future Federal funds for the Project, if any, will be awarded and released to the Grantee;
- (d) establish the Grantee's financial commitment to the Project including its obligation to fund the Local Share, its obligation to Complete the Project with a specified amount of Federal assistance, its obligation to achieve revenue operation of the Project by a specified date, its obligation to pay all costs necessary to Complete the Project that are in excess of the Estimated Net Project Cost, and its obligation to finance the future maintenance and operational costs of the Project; and
- (e) facilitate timely and efficient management of the Project.

SECTION 3. PREVIOUS FEDERAL DOCUMENTS AND GRANTS

- (a) The Government's laws, policies and procedures require the completion of a project development process and environmental review prior to the Award and Execution of this Agreement. Prior Grants of Federal assistance awarded by the Government for this project development process are described in Attachment 5 to this Agreement. These Grants (and any other documents that are described in Attachment 5, including Letters of No Prejudice) are incorporated by reference and made part of this Agreement, except for the terms and conditions thereof specifically superseded by this Agreement. Further, in Executing this Agreement, the Grantee assures that the certifications and assurances (made by the Grantee or on behalf of the Grantee or by a third party) upon which the Government relied in these prior actions were made

to the Government in good faith and to the best of the Grantee's knowledge and belief, and that the Grantee has no present knowledge of facts or circumstances substantially affecting the continued validity of these certifications and assurances that the Grantee has not formally conveyed to the Government prior to the Government's Award of funding set forth in this Agreement.

(b) This Agreement does not discharge or rescind any of the terms, conditions, or obligations established under the documents set forth in Attachment 5 unless specifically stated otherwise herein. Further, the terms, conditions and obligations of this Agreement take precedence over the provisions of all prior agreements related to the Project between the Grantee and the Government and will be controlling for all actions related to the Project taken after the Date of this Agreement, unless specifically stated otherwise herein.

(c) No amendments will be sought or approved to increase the amount of funds in the prior Grants listed in Attachment 5 beyond the amounts described in this Agreement as available to the Project.

SECTION 4. OBLIGATION TO COMPLETE THE PROJECT

The Government has no obligation to provide any financial assistance for the Project beyond the Maximum Federal New Starts Financial Contribution. If the total Federal funding provided under Section 8 of this Agreement, "Limitations of Federal Funding Commitment," is insufficient to undertake revenue operation of the Project and the subsequent activities necessary to Complete the Project, the Grantee agrees to Complete the Project and accepts sole responsibility for the payment of any additional costs (overruns). The Grantee promises to secure and provide such additional resources as are necessary to pay these additional costs (overruns) and expeditiously Complete the Project without further financial assistance from the Federal capital new starts program. The Grantee further agrees to notify the Government when the total project cost is expected to exceed the funds available and identify the source of funds to cover any shortfall.

SECTION 5. REVENUE OPERATIONS DATE

(a) The Grantee agrees and promises to achieve revenue operations of the Project on or before _____ (7) _____, the Revenue Operations Date, in accordance with the terms and conditions of this Agreement.

(b) The Revenue Operations Date is a significant term of this Agreement. The Grantee's failure to achieve the operational functions of the Project on or before the Revenue Operations Date will constitute a breach of this Agreement. Upon the Grantee's request, the Government may determine at its sole discretion to waive a breach or an anticipatory breach of this Agreement and to extend the Revenue Operations Date if there is an unavoidable delay in achieving the operational goals of the Project resulting from an event or circumstance beyond the control of the Grantee, or if the Government determines that allowing the delay is in the best interest of the Government and the success of the Project. Requests by the Grantee for waiver of a breach or

anticipatory breach of this Agreement and extension of the Revenue Operations Date for the reasons set forth herein shall be submitted promptly (with appropriate documentation) to the Government. In the exercise of its discretion to waive the breach and extend the Revenue Operations Date, the Government will take into consideration the actions and measures taken by the Grantee to ensure adherence to its promise to achieve the operational goals of the Project on or before the scheduled Revenue Operations Date.

(c) Delays in appropriations of funds from Congress shall not constitute a basis for extension of the Revenue Operations Date.

(d) The Government's consent to extend the Revenue Operations Date pursuant to Paragraph (b) of this Section 5 does not constitute a basis for additional Federal financial assistance beyond the Maximum Federal New Starts Financial Contribution.

SECTION 6. NET PROJECT COST

(a) This Grant is to assist in the payment of actual eligible costs within the scope of the Project under this Agreement, minus any amount that can reasonably be financed from revenues of the Grantee. If the funds awarded under this grant exceed the amount necessary to finance the Federal share, those excess funds are not available to the Grantee for payment of costs beyond the scope of this Project supported by this Grant.

(b) In accordance with 49 U.S.C. § 5309(h), a refund or reduction of the Grantee's Local Share of the Net Project Cost requires a refund to the Government of a proportional amount of the Federal financial assistance provided under this Agreement.

(c) The portion of the Net Project Cost that may be financed by the Government with capital new starts funds may not exceed the amount of the Maximum Federal New Starts Financial Contribution for this Project as stated in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment."

SECTION 7. ESTIMATED NET PROJECT COST

(a) The Government's determination to provide financial assistance for the Project is based, in significant part, upon the Grantee's estimated costs as set forth in the "Baseline Cost Estimate," Attachment 3 to this Agreement. The Estimated Net Project Cost reported in Attachment 3 is \$____(8)_____.

(b) The Estimated Net Project Cost financed with the Execution of this Agreement is limited by the amount of the Maximum FTA Amount Awarded. The amount of the Estimated Net Project Cost and the amount of the Maximum FTA Amount Awarded are stated in the first page of this Agreement. The amount reimbursable by the Government is limited to the lesser of either the amount of the Maximum FTA Amount Awarded or the maximum percentage of FTA participation permitted by Federal law and regulations. Additional funds will not be provided until a Grant amendment awarding additional funds and amending this Full Funding Grant

Agreement is executed.

SECTION 8. LIMITATIONS OF THE FEDERAL FUNDING COMMITMENT

[Use the following paragraphs (a) and (b)(1) if any amount of capital new starts funds will be awarded when the Government and the Grantee enter into the Full Funding Grant Agreement:]

(a) With its Award set forth in this Agreement, the Government obligates \$ _____ (9a) for a total award of \$ _____ (9b) in Federal capital new starts financial assistance for the Project. The sources of this Federal financial assistance are set forth in the "Project Budget," Attachment 3A. These funds are in addition to all previous Federal financial commitments to the development of the Project as set forth in the schedule of "Prior Grants and Related Documents," Attachment 5 of this Agreement.

(b)(1) With its Award set forth in this Agreement, the Government also acknowledges its intent to provide Federal capital new starts financial assistance for the Project in addition to the amount set forth in Paragraph (a) of this Section 8. The amount of additional capital new starts funds the Government may provide will not exceed \$ _____ (9c). The anticipated sources of Federal financial assistance in this additional amount are listed in Attachment 6 to this Agreement, "Schedule of Federal Funds for the Project." Additional funds obligated pursuant to this Paragraph will be subject to all the terms, conditions and obligations established by this Agreement. Accordingly, it is expected that the award of additional funds will be processed through amendments to this Agreement.

[Use the following paragraphs (a) and (b)(1) if no capital new starts funds will be awarded when the Government and the Grantee enter into the Full Funding Grant Agreement:]

(a) The sources of Federal financial assistance for the Project are set forth in the "Project Budget," Attachment 3A. These funds are in addition to all previous Federal financial commitments to the development of the Project as set forth in the schedule of "Prior Grants and Related Documents," Attachment 5 of this Agreement. The Government is not obligating and awarding any Federal capital new starts funds for the Project with the Award and Execution of this Agreement.

(b)(1) With its Award set forth in this Agreement, the Government acknowledges its intent to provide Federal capital new starts assistance for the Project in an amount that will not exceed \$ _____ (9d). The anticipated sources of Federal financial assistance in this amount are listed in Attachment 6 of this Agreement, "Schedule of Federal Funds for the Project." All Federal capital new starts funds obligated pursuant to this Paragraph will be subject to all the terms, conditions and obligations set forth in this Agreement. Accordingly it is expected that the award of additional funds will be processed through amendments to this Agreement.

(b)(2) The award by the Government of additional Federal capital new starts financial assistance to the Project under Paragraph (b)(1) of this Section 8 is subject to the following limitations:

(A) the availability of appropriated funds, and

(B) the Grantee's continued performance under the terms and conditions of this Agreement.

(c) The Maximum Federal New Starts Financial Contribution for this Project under the capital new starts category of funds is limited to \$ (9e), which is the sum of the amounts set forth in Paragraphs (a) and (b)(1) of this Section.

SECTION 9. FEDERAL FUNDING -- OTHER SOURCES

The Maximum Federal New Starts Financial Contribution specified in Section 8(c) of this Agreement does not include funds other than from the capital new starts program under 49 U.S.C. Chapter 53. Should such other Federal funds be provided for the Project in addition to the Federal capital new starts funds set forth in Attachment 6 of this Agreement, the limitation on the Federal funding commitment set forth in Section 8 of this Agreement shall not apply to those funds. Accordingly, such additional funds shall be excluded from the calculation of Maximum Federal New Starts Financial Contribution. Funds awarded pursuant to this Section will be subject to all other terms, conditions and obligations set forth in the Agreement.

SECTION 10. LOCAL FINANCIAL COMMITMENT – CAPITAL COSTS

(a) As a condition of the Government's Award of this Full Funding Grant, the Grantee has developed and adopted a Financing Plan for financing all Project Costs necessary to Complete the Project. In addition to the amount of Federal funds requested, the Financing Plan includes a statement identifying the State, local and private sources of funding and the amount of funds available for and committed to the Project from each source. This Financing Plan, as accepted by the Government, with the supporting documentation (including formal funding agreements and commitments) is hereby incorporated by reference and made part of this Agreement.

(b) The Grantee hereby commits and certifies that it will provide funds in an amount sufficient, together with the Federal contribution (acknowledging the limitations as set forth in this Agreement), to assure timely and full payment of the Project Costs as necessary to Complete the Project.

(c) The Grantee hereby commits and certifies that the Local Share portion of its financing commitment will be provided from funding sources other than: Federal funds (except as may otherwise be authorized by Federal statute); receipts from the use of Project facilities or equipment (except as may otherwise be authorized by Federal statute); or revenues of the public transit system in which such facilities or equipment are used.

(d) Given the Estimated Net Project Cost, as set forth in Section 7 of this Agreement, the Grantee's financial commitment to the Net Project Cost is estimated to total \$ (10). This amount constitutes the Local Share needed to match the Maximum Federal New Starts Financial Contribution for the Project and Other Federal Sources. In the event that the actual

Federal financial contribution for the Project is reduced or is increased or the funding percentage as set forth in this Agreement is changed, the portion of the Grantee's financial contribution for the Project that is identified as Local Share shall be adjusted accordingly.

(e) The Grantee agrees to notify the Government of any change in circumstances or commitments that adversely affects the Grantee's plan to fund the Project Costs necessary to Complete the Project as set forth in the Financing Plan. In its notification, the Grantee shall advise the Government of what actions it has taken or plans to take to ensure adequate funding resources and shall reaffirm its commitment to the Government as set forth in Paragraph (b) of this Section 10.

SECTION 11. AUTHORIZATION TO ADVANCE PROJECT WITHOUT PREJUDICE

The Grantee may incur costs or expend local funds for all phases of the Project as is reasonably necessary to advance the Project prior to an award of Federal funding assistance without prejudice to possible future Federal participation in or reimbursement of the Project Costs to the extent that such costs are incurred in accordance with all applicable Federal requirements and this Agreement. It is understood that the authority conferred on the Grantee to advance the Project without prejudice does not constitute a legal commitment by the Government to obligate and award Federal funds.

SECTION 12. LOCAL FINANCIAL COMMITMENT – OPERATING AND MAINTENANCE COSTS

(a) As a condition of the Government's Award of funding set forth in this Agreement, the Grantee has developed and adopted a Financing Plan to finance the future operation and maintenance of the Project that also takes into consideration the Grantee's continuing financial responsibilities to operate, maintain and reinvest in its existing transit system. This Financing Plan, as accepted by the Government, and the supporting documentation (including specific funding commitments) evidencing stable and dependable funding sources is an essential part of the Grantee's Application and is made part of this Agreement by incorporation of the Application.

(b) With the Execution of this Agreement, the Grantee assures that it has stable and dependable funding sources, sufficient in amount and in degree of commitment, to operate and maintain its entire mass transportation system at an adequate and efficient level of service, including the future operation and maintenance of the Project without additional Federal assistance beyond the amounts set forth in the Financing Plan. The foregoing assurance does not preclude the Grantee from altering service through contracts with private providers of mass transportation services.

(c) The Grantee will notify the Government of any change in circumstances or commitments that adversely affects the Grantee's plan to fund the maintenance and operating costs of the Project as set forth in the Financing Plan. In its notification, the Grantee will advise the Government of actions it has taken or plans to take to ensure adequate funding resources and will reaffirm to the Government its assurance as set forth in Paragraph (b) of this Section.

SECTION 13. BASELINE COST ESTIMATE

(a) In its Application, the Grantee submitted to the Government a Baseline Cost Estimate for the activities constituting the Project. The Baseline Cost Estimate is accepted by the Government and is Attachment 3 of this Agreement. The Baseline Cost Estimate is derived from cost estimates of the individual third party contracts and force account work that, in sum, constitute the Project; it reflects appropriate escalation, contingency, and Project schedule dates.

(b) The Government intends to use the Baseline Cost Estimate to monitor the Grantee's compliance with certain terms and conditions of this Agreement. The Baseline Cost Estimate established in Attachment 3 serves as the measure of cost estimates for the Project as of the Date of this Agreement, and should not be amended or modified during the implementation of the Project.

(c) The Grantee will submit cost reports on the implementation of the Project as required by this Agreement and in a format consistent with the units set forth in the Baseline Cost Estimate so that the Government can, with reasonable diligence, reconcile the Grantee's reports with the Baseline Cost Estimate.

SECTION 14. BASELINE SCHEDULE

(a) In its Application, as approved, the Grantee submitted a Baseline Schedule for the Project that demonstrates how the Grantee intends to implement the Project and meet the Revenue Operation Date. This Baseline Schedule has been accepted by the Government and is Attachment 4 of this Agreement.

(b) The schedule for the Project may be modified from time to time at the discretion of the Grantee. However, the Baseline Schedule is not to be modified because it is to be used as a basis for comparing planned to actual project implementation. The Grantee will notify the Government when a Project schedule modification has the potential to change the Revenue Operations Date and describe the actions planned to recover the schedule. The Government's acquiescence in such notice will not be deemed approval by the Government of an extension of a Revenue Operations Date unless the Government expressly grants an extension in writing.

SECTION 15. PROJECT MANAGEMENT OVERSIGHT

The Project is a "Major Capital Project" as defined in FTA's Project Management Oversight regulations at 49 C.F.R. § 633.5. Accordingly, the Grantee agrees that all requirements and conditions set forth in the rule at 49 C.F.R. Part 633 apply to the Project activities. Noncompliance with any regulatory requirements shall constitute a breach of this Agreement, unless the Government formally waives the regulatory requirement.

SECTION 16. ENVIRONMENTAL PROTECTION

(a) As a condition precedent to this Agreement, the environmental impacts of the Project have been assessed as required by law. The results of that assessment and the adopted mitigation measures are described in the environmental documents identified in Attachment 7 of this Agreement. These documents together with related agreements and supporting documentation are incorporated by reference and made part of this Agreement. To assist the Government in monitoring the implementation of the adopted mitigation measures, these measures are specifically described in Attachment 7 of this Agreement. It is understood and agreed that the description in Attachment 7 shall not supersede or in any way result in a circumvention of the requirements set forth in the Government's environmental record for the Project.

(b) Certain terms and conditions of this Agreement as related to the Grantee's responsibility to ensure protection of the environment are set forth in Section 25 of the Master Agreement, "Environmental Requirements." Under Subsection 25.1, "Mitigation of Adverse Environmental Effects," the Grantee is required, among other actions, to undertake all environmental mitigation measures that are identified in environmental documents prepared for the Project. Accordingly, the Grantee understands that it shall not withdraw or substantially change any of the adopted mitigation measures as described in the Government's environmental record for the Project without the express written approval of the Government.

(c) This Section is intended only to supplement the provisions set forth in Section 25 of the Master Agreement, "Environmental Requirements."

SECTION 17. LABOR PROTECTION

The Grantee will carry out the Project in conformance with the terms and conditions determined by the Secretary of Labor to be fair and equitable to protect the interests of employees affected by the Project and meet the requirements of 49 U.S.C. § 5333(b) and U.S. Department of Labor (USDOL) Guidelines at 29 C.F.R. Part 215. These terms and conditions are identified in the letters of certification from USDOL on the dates set forth on the first page of this Agreement. The Grantee will carry out the Project in compliance with the conditions stated in the USDOL certification letters. Those letters and any documents cited therein are incorporated by reference and made part of this Agreement.

SECTION 18. GOVERNMENT ACTIONS

(a) In all cases where the Government's review, approval or concurrence is required under the terms and conditions of this Agreement, the Government will provide its response within sixty (60) calendar days of receipt from the Grantee of all materials reasonably necessary for the formulation of the Government's response.

(b) If the Government determines that its position cannot be finalized within that sixty (60) day period, the Government will notify the Grantee, in writing, within thirty (30) days following receipt of the Grantee's submission that the Government's response will be delayed and advise

the Grantee of the Government's anticipated time period for response.

(c) Whenever the Government's approval or concurrence is needed on any matter pertaining to or concerning this Agreement, the Government's approval or concurrence will not be unreasonably withheld.

SECTION 19. REMEDIES

(a) Substantial failure of the Grantee to Complete the Project in accordance with the Application and this Agreement will be a default of this Agreement. In the event of default, the Government will have all remedies at law and equity, including the right to specific performance without further Federal financial assistance, and the rights to termination or suspension as provided by Section 11 of the Master Agreement, "Right of the Federal Government to Terminate." The Grantee recognizes that in the event of default, the Government may demand all Federal funds provided to the Grantee for the Project be returned to the Government. Furthermore, a default of this Agreement will be a factor considered before a decision is made with respect to the approval of future Grants requested by the Grantee.

(b) Under the provisions of Section 15 of this Agreement, "Project Management Oversight," and under the terms and conditions of the Master Agreement, the Government will review performance by the Grantee to determine whether satisfactory progress is being made to Complete the Project. In the event that the Government determines that the Grantee is in breach of this Agreement, the Government may withhold its approvals of further funding and suspend drawdown of funds, under the provisions of Section 11 of the Master Agreement, "Right of the Federal Government to Terminate," until any necessary corrective action, which may be required by the Government, is accomplished. Any breach of this Agreement that is not corrected within a reasonable period of time will be a default of this Agreement. The Government in its discretion may permit the cost of such corrective action to be deemed a Project Cost, provided that such cost is an allowable cost under the requirements of Section 9.c of the Master Agreement, "Costs Reimbursed," and so long as it remains within the limits of the Maximum Federal New Starts Financial Contribution set forth in Section 8 of this Agreement, "Limitations of the Federal Funding Commitment."

(c) In the event of a breach of this Agreement by the Grantee and before the Government takes action contemplated by this Section, the Government will provide the Grantee with ninety (90) days written notice that the Government considers that such a breach has occurred and provide the Grantee a reasonable period of time to respond and to take necessary corrective action.

SECTION 20. CONTENTS OF AGREEMENT

This Full Funding Grant Agreement consists of the text of this Agreement, which includes the first pages setting forth significant characteristics of the Agreement (such as the maximum Federal funds obligated and awarded for expenditure on the Project and the funding ratio of Federal and local funds to be expended for the Project, and such other data), followed by the Terms and Conditions, and the Attachments to the Agreement. The Agreement also includes the

following documents incorporated by reference and made part of this Agreement: the "Federal Transit Administration Master Agreement," FTA Form MA(11a_) (October 1, 200 (11b___), as may be revised from time to time, the Application, the Government's environmental record for the Project, related agreements, and prior Grant Agreements for the Project referenced in Attachment 5 of this Agreement. Should the Federal assistance award letter include special conditions for the Project, that letter is incorporated by reference and made part of this Agreement. Any inconsistency between the Application and the terms and conditions of this Full Funding Grant Agreement will be resolved according to the clear meaning of the provisions of this Agreement and Attachments hereto.

SECTION 21. – SIMULTANEOUS CREATION OF AGREEMENT IN ELECTRONIC FORMAT

Simultaneous to the Award and Execution of this Agreement set forth in typewritten hard copy, the Agreement is being awarded and executed by electronic means through FTA's electronic award and management system. To the extent any discrepancy may arise between the typewritten version and the electronic version of this Agreement, the typewritten version will prevail. Should any special conditions or requirements for the Project be added separately in the electronic version, those conditions or requirements are incorporated by reference and made part of this Agreement.

SECTION 22. AMENDMENTS TO AGREEMENT

Amendments to any of the documents referenced in Section 20, "Contents of Agreement," will be made in accordance with the requirements and procedures set forth in FTA Circular 5010.1C, "FTA Project Management Guidelines" (October 1, 1998), as may be amended from time to time, and FTA Circular 5200.1A, "Full Funding Grant Agreement Guidance," as may be amended from time to time.

SECTION 23. ATTACHMENTS -- INCORPORATION

Each and every Attachment to this Agreement is incorporated by reference and made part of this Agreement.

SECTION 24. NOTICES

Notices required by this Agreement will be addressed as follows:

As to the Government:

[(12a) Insert the name and address of the appropriate FTA Regional Administrator]

As to the Grantee:

[(12b) Insert the name and address of an appropriate officer of the Grantee]

SECTION 25. APPLICABLE LAW

If neither Federal statute nor Federal common law governs the interpretation of the provisions of this Agreement, the state law of the State of _____(13)_____ will apply. This provision is intended only to supplement Section 2.c of the Master Agreement, "Application of Federal, State, and Local Laws and Regulations."

SECTION 26. AWARD AND EXECUTION OF AGREEMENT

There are several identical counterparts of this Agreement in typewritten hard copy; each counterpart is to be fully signed in writing by the parties and each counterpart is deemed to be an original having identical legal effect. When signed and dated by the authorized official of the Government, this instrument will constitute an Award that should be executed by the Grantee within ninety (90) days of the date of the Government's Award (FTA Award). The Government may withdraw its Award of financial assistance and obligation of funds if this Agreement is not executed within the ninety (90)-day period. Upon full Execution of this Agreement by the Grantee, the effective date will be the date the Government awarded funding under this Agreement as set forth below.

THE GOVERNMENT HEREBY AWARDS THIS FULL FUNDING GRANT THIS
_____ DAY OF _____, 200_.

Signature: _____

Name (Print/Type) _____

Federal Transit Administrator

FEDERAL TRANSIT ADMINISTRATION

EXECUTION BY GRANTEE

The Grantee, by executing this Agreement, affirms this FTA Award; adopts and ratifies all statements, representations, warranties, covenants, and materials it has submitted to FTA; consents to this Award; and agrees to all terms and conditions set forth in this Agreement.

THE GRANTEE HEREBY EXECUTES THIS FULL FUNDING GRANT THIS
_____ DAY OF _____, 200_.

Signature: _____

Name (Print/Type): _____

Title of Grantee Official: _____

Name of Grantee Organization: _____

ATTESTED BY:

Signature: _____

Name (Print Type): _____

Title of Attesting Official: _____

Name of Organization: _____

AFFIRMATION OF GRANTEE'S ATTORNEY

As the undersigned Attorney for the Grantee, I affirm to the Grantee that I have examined this Agreement and the proceedings taken by the Grantee relating to it. As a result of this examination I hereby affirm to the Grantee the Execution of the Agreement by the Grantee is duly authorized under state and local law. In addition, I find that in all respects the Execution of this Agreement is due and proper and in accordance with applicable State and local law. Further, in my opinion, this Agreement constitutes a legal and binding obligation of the Grantee in accordance with the terms of the Agreement. Finally, I affirm to the Grantee that, to the best of my knowledge, there is no legislation or litigation pending or imminent that might adversely affect the full implementation of the Project in accordance with the terms thereof.

DATED _____ DAY OF _____, 200_.

AFFIRMED BY:

Signature: _____

Name (Print Type): _____

Title of Official: _____

Name of Organization: _____

APPENDIX B (continued)

Example Attachments

Attachment 1

Springfield Metropolitan Transit Authority (MTA) -- East Corridor LRT Project

Scope of the Project

MTA provides light rail service to the Springfield Metropolitan Area on two lines. The Blue Line operates on a 25.7-mile alignment from the Ocean to downtown Springfield and East Valley. The Orange Line operates on a 21.6-mile alignment from downtown Springfield to the east county city of Shelbyville.

The East Corridor Light Rail Transit (LRT) Project adds 5.9 miles of double track to the existing MTA LRT System. The project links the Blue Line in East Valley to the Orange Line. The Revenue Operations Date is December 31, 2005.

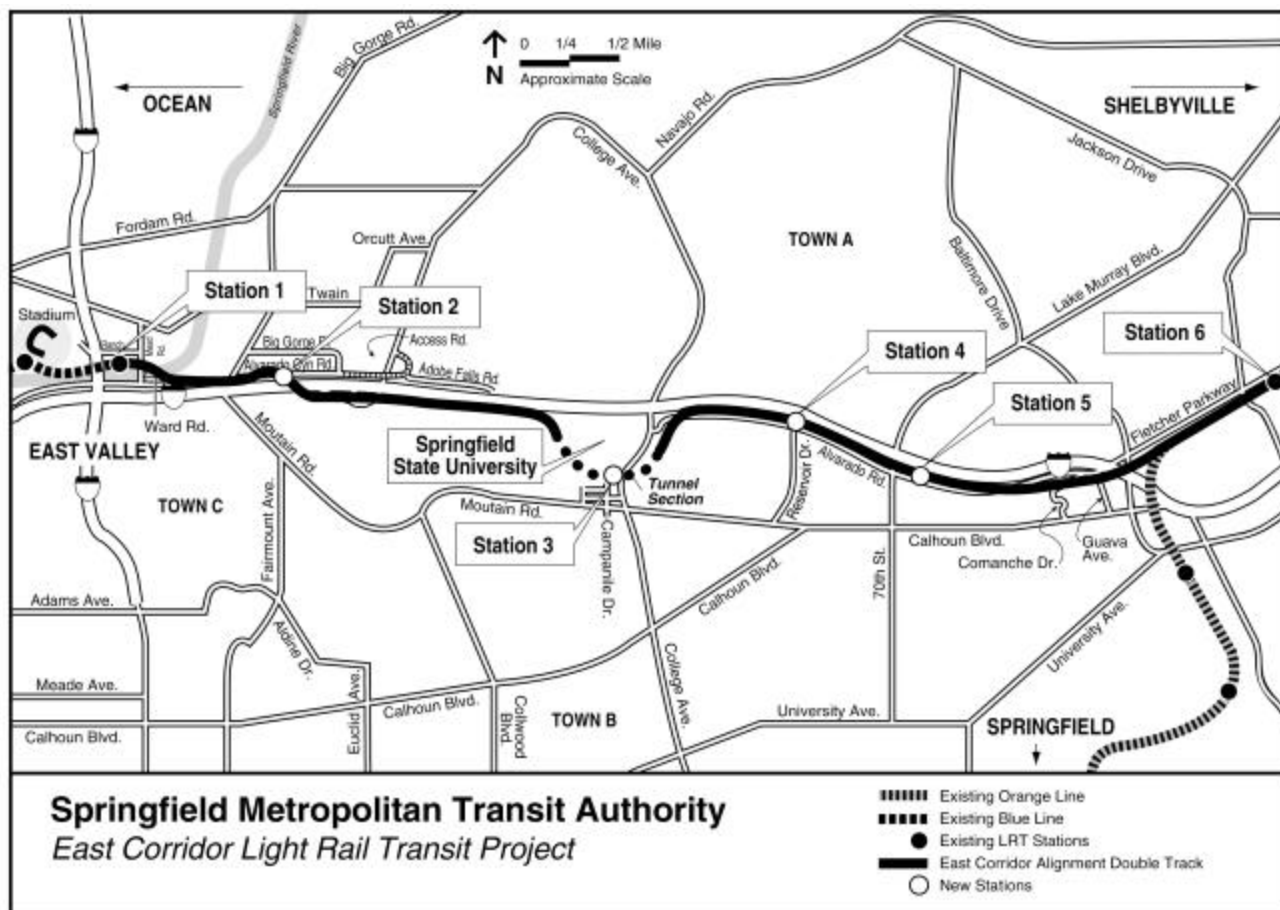
The scope includes four new stations. Two of the stations have parking lots. Another is an underground station on the Springfield State University (SSU) Campus in a 0.7-mile tunnel. An existing bus transit center will be relocated directly above the underground station. The fourth is an aerial station with elevated platforms with shelters, elevators, stairways and artwork. The two other stations have at-grade platforms with shelters and station art.

The remaining 5.2 miles of the LRT system includes at-grade and aerial transitway. There are 2.0 miles of LRT viaduct and three LRT bridges, one crossing of the LRT below a street and two highway ramps, and one at-grade crossing of a street. The rail systems will include track work, signaling and train location. In addition, modifications to the existing Orange Line for a turnback track and improved signaling are required. Included in the scope is the procurement of approximately 11 new light rail vehicles.

Other scope elements include: the acquisition of right-of-way, utility relocations, the procurement of ticket vending machines and communications equipment, and start up and testing of the project for revenue service.

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Springfield Metropolitan Transit Authority (MTA) East Corridor LRT Project Project Map



Attachment 2

Springfield Metropolitan Transit Authority (MTA) East Corridor LRT Project

Project Description

Narrative. MTA provides light rail service to the Springfield Metropolitan Area on two lines. The Blue Line operates on a 25.7-mile alignment from the Ocean to downtown Springfield and East Valley. The Orange Line operates on a 21.6-mile alignment from downtown Springfield to the east county city of Shelbyville.

The East Corridor Light Rail Transit (LRT) Project adds 5.9 miles of double track to the existing MTA LRT System. The project links the Blue Line in East Valley to the Orange Line. At the December 31, 2005, Revenue Operations Date, the project will operate on 15-minute headways, and by 2015, the project will operate at 7.5-minute headways. In 1998, system wide, daily light rail boardings reached 72,000. By 2015, system wide, daily light rail boardings are projected to reach 140,600, with 10,800 daily boardings coming from within the East Valley LRT Project area.

To optimize the inherent capability of the Light Rail Transit systems (LRT) to move large numbers of passengers quickly and to optimize the benefits of capital expenditure on fixed guideways, MTA will provide priority movement of transit vehicles in interaction with other vehicles to the maximum extent practicable, specifically at grade crossings along the full length of the project covered under this FFCA

Project Description by Contract Unit.

Contract Unit 01 – Rolling Stock

Provides for development of technical and performance specifications; bid and evaluation processes; and order, manufacture, inspection and delivery of approximately 11 new light rail vehicles.

Contract Unit 02 – Transitway Construction

This unit includes seven elements as follows:

- Construction includes an early utility relocation contract to clear the tunnel and Springfield State University (SSU) station site of underground utilities.
- The Tunnel Segment is the construction of the light rail station and tunnel. This station and the tunnel are wholly located on the SSU campus. The tunnel length is

0.7 miles. A single contract would be awarded to build the tunnel and the underground station.

- The University Segment is the construction of the light rail transitway from the current end of the system at the Springfield East Station to the west tunnel portal at SSU. A single construction contract would be awarded for this segment including 1.2 miles of cast-in-place concrete viaduct and bridges, and one mile of on grade track. The contract includes one cast-in-place concrete elevated station structure with grade level parking and bus facilities.
- The Shelbyville Segment construction includes the transitway from the east side of the SSU campus to the point where the project joins the existing Orange Line. A single construction contract would be awarded for this segment. The contract includes two stations. The Medical Center Station and 12th Street Station will be constructed on new box culverts over channelized sections of Shelby Creek. The 12th Street Station construction includes a parking lot and bus bays.
- A single systems contract would be bid to construct the rail, traction power and train systems for all 5.9 miles of the project.
- A separate contaminated soil construction item is maintained to account for engineering, regulatory fees, and clean up costs for any contaminated soil or groundwater encountered during construction. Site assessment indicates contamination should be limited to the Gastown Station site.
- Right-of-Way provides for the purchase of all right-of-way required to construct, operate and maintain the transitway. Right-of-Way will be acquired in accordance with FTA and State requirements. The number of full parcel acquisitions and partial take acquisitions is estimated at 8 and 32 respectively. This activity includes all land, fixtures and equipment, relocation, and legal services required to complete property acquisitions.

Contract Unit 03 – Support Equipment & Facilities

Provides for the development of technical specifications, procurement process, manufacture, testing and acceptance of new fare vending machines.

Contract Unit 04 – Signal & Communications

Provides for the development of technical specifications, procurement processes, manufacture, testing and acceptance for radio and landline communications systems for voice, data and alarms.

Contract Unit 05 – Other Capital Items

This unit includes management and professional services as follows:

- Project Administration provides all direct labor and general administrative costs incurred by MTA to support the project design, construction and startup.
- Construction Management includes contracted services for quality assurance and quality control; materials testing; field inspection of civil facilities, structures, track work, traction power and signaling; tracking of contractor progress and costs; and preparation of pay estimates and change orders.
- Professional Services are contract specialty services that support design and construction of the project such as community outreach, environmental monitoring and expert review.
- Final Tunnel Engineering services provides for the development of plans, specifications and estimates for the design of the tunnel segment of the project and the underground station. Included in these services are surveying, mapping, civil and structural plans, design calculations, station design, fire and life safety compliance, building systems and other work as required to produce complete construction documents.
- Final Line Segment Engineering services provides for development of specifications and estimates for the design of the above ground segments of the project. Included in these services are surveying, mapping, civil and structural plans, design calculations, station design, trackwork plans, and traction power, catenary and signaling design and other work as required to produce complete construction documents.

Contract Unit 06 – Startup

This unit includes line startup activities and the procurement of safety and maintenance equipment specific to the project. Startup activities include: final track and systems testing and acceptance, pre-revenue train testing, community involvement activities, and new system graphics.

Contract Unit 07 – Project Contingency

Contingency provides a funding resource for increases over the estimated project cost resulting from changes in market conditions, unknown field conditions, changes in regulations or other factors that could not be accounted for in other project unit terms.

Preliminary Engineering

These activities include environmental impact assessment, development and approval of an FEIS, and engineering activities related to preparation of alignment plans, profiles, civil work and estimates in support of the environmental process. These

activities occurred prior to the LONP and start of final design and are complete:
therefore, these activities are not reflected in Attachment 4, Baseline Schedule.

Attachment 3 – Baseline Cost Estimate
Springfield Metropolitan Transit Authority (MTA)
East Corridor LRT Project

Table 1- BCE By Contract Units

<u>CONTRACT UNIT 01 – ROLLING STOCK</u>		Amount
11 LRT VEHICLES		<u>\$44,500,000</u>
	Subtotal:	\$44,500,000
<u>CONTRACT UNIT 02 – TRANSITWAY CONSTR.</u>		
UTILITY RELOCATION		\$100,500,000
TUNNEL SEGMENT		\$137,500,000
UNIVERSITY SEGMENT		\$93,000,000
SHELBYVILLE SEGMENT		\$147,000,000
LRT SYSTEMS		\$9,800,000
CONTAMINATED SOIL		\$3,500,000
RIGHT-OF-WAY ACQUISITION		<u>\$85,000,000</u>
	Subtotal:	\$576,300,000
<u>CONTRACT UNIT 03 – SUPPORT EQUIPMENT & FACILITIES</u>		
PROCURE & INSTALL FARE COLLECTION EQUIP.		<u>\$11,600,000</u>
	Subtotal:	\$11,600,000
<u>CONTRACT UNIT 04 – SIGNAL & COMMUNICATIONS</u>		
PROCURE & INSTALL COMMUNICATIONS EQUIP.		<u>\$11,600,000</u>
	Subtotal:	\$11,600,000
<u>CONTRACT UNIT 05 – OTHER CAPITAL ITEMS</u>		
PROJECT ADMINISTRATION		\$45,000,000
CONSTRUCTION MANAGEMENT		\$62,000,000
PROFESSIONAL SERVICES		\$20,000,000
FINAL ENGINEERING & DESIGN		\$25,000,000
- TUNNEL SEGMENT		
FINAL ENGINEERING & DESIGN		\$39,000,000
- LINE SEGMENTS		
PROJECT FINANCE COST		<u>\$20,000,000</u>
	Subtotal:	\$211,000,000
<u>CONTRACT UNIT 06 – STARTUP</u>		
STARTUP COSTS		<u>\$23,000,000</u>
	Subtotal:	\$23,000,000
<u>CONTRACT UNIT 07 – PROJECT CONTINGENCY</u>		
PROJECT CONTINGENCY		<u>\$115,000,000</u>
	Subtotal:	\$115,000,000
	TOTAL	\$993,000,000
PRELIMINARY ENGR.		<u>\$7,000,000</u>
BASELINE COST ESTIMATE	GRAND TOTAL	\$1,000,000,000

Attachment 3 – Baseline Cost Estimate

Table 2 – Escalated BCE Calculation

DESCRIPTION	1999 COST ESTIMATE	W/ CONTINGENCY	START DATE	MIDPOINT	END DATE	DURATION (MONTHS)	MIDPOINT ESCALATION FACTOR	ESCALATED BCE
Preliminary Engineering	7,000,000	7,000,000					1	7,000,000
Rolling Stock	36,000,000	40,000,000	Aug-99	Aug-02	Sep-05	72	1.1125	44,500,000
Transitway Construction	471,132,710	523,480,788	Dec-98	Mar-02	Jun-05	79	1.1009	576,300,000
Support Equipment and Facilities	9,238,121	10,264,578	Mar-00	Dec-02	Sep-05	66	1.1301	11,600,000
Signal and Communications	9,373,317	10,414,796	Aug-99	Aug-02	Sep-05	72	1.1138	11,600,000
Other Capital	171,498,239	190,553,599	Aug-98	May-02	Dec-05	88	1.1073	211,000,000
Start Up	16,931,130	18,812,367	Jun-04	Mar-05	Dec-05	18	1.2226	23,000,000
Subtotal	721,173,516	800,526,129						885,000,000
Project Contingency		103,856,227	Aug-98	May-02	Dec-05	88	1.1073	115,000,000
Total		904,382,356					1.102	1,000,000,000

Attachment 3 – Baseline Cost Estimate

Table 3: BCE By Source of Funding

DESCRIPTION	BASELINE BUDGET	FEDERAL SHARE CMAQ	FEDERAL SHARE 5309	LOCAL SHARE
Rolling Stock	44,500,000	0	32,363,636	12,136,364
Transitway Construction	576,300,000	109,600,000	319,490,909	147,209,091
Support Equipment and Facilities	11,600,000	7,200,000	1,890,909	2,509,091
Signal and Communications	11,600,000	7,200,000	1,890,909	2,509,091
Other Capital	211,000,000	71,200,000	88,931,918	50,868,182
Start Up	23,000,000	9,200,000	8,363,636	5,436,364
Project Contingency	115,000,000	40,000,000	47,272,727	27,727,273
Subtotal	993,000,000	244,400,000	500,204,544	248,395,456
Preliminary Engineering	7,000,000	5,600,000		1,400,000
Total	1,000,000,000	250,000,000	500,204,544	249,795,456

Sources of Funds and Matching Share Ratios				
Source of Federal Funds	Costs Attributed to Source of Funds (millions)	Federal/Local Matching Ratio within Source	Federal Funds (millions)	Local Funds (millions)
5309 New Starts	\$687.5	73/27	\$500.20	\$187.3
5307/CMAQ	\$312.5	80/20	\$250.0	\$62.5
Totals	\$1,000.0		\$750.2	\$249.8
Overall Federal Share of Project		75% (\$750/\$1000)		
New Starts Share of Project		50% (\$500/\$1000)		

Attachment 3A – Project Budget

Scope and Activity Description			Section 5309 New Starts			Section 5307/CMAQ			Project Totals		
Scope		Quantity	Federal	Local	Total	Federal	Local	Total	Federal	Local	Total
131-01	New Start Contract Unit #1	11	\$ 32,363,636	\$ 12,136,364	\$ 44,500,000				\$ 32,363,636	\$ 12,136,364	\$ 44,500,000
	Activity										
	13.13.20 Buy LRT Vehicles - Contract Unit #1	11	\$ 32,363,636	\$ 12,136,364	\$ 44,500,000				\$ 32,363,636	\$ 12,136,364	\$ 44,500,000
Scope											
132-00	Transitway Lines - New Start - Contract Unit #2		\$ 319,490,909	\$ 119,809,091	\$ 439,300,000	\$ 109,600,000	\$ 27,400,000	\$ 137,000,000	\$ 429,090,909	\$ 147,209,091	\$ 576,300,000
	Activity										
	13.23.03 Construct Utility Relocation - Contract Unit #2		\$ 64,000,000	\$ 24,000,000	\$ 88,000,000	\$ 10,000,000	\$ 2,500,000	\$ 12,500,000	\$ 74,000,000	\$ 26,500,000	\$ 100,500,000
	13.23.04 Construct Tunnels - Contract Unit #2		\$ 76,363,636	\$ 28,636,364	\$ 105,000,000	\$ 26,000,000	\$ 6,500,000	\$ 32,500,000	\$ 102,363,636	\$ 35,136,364	\$ 137,500,000
	13.23.03 Construct University Segment Contract Unit #2		\$ 56,727,273	\$ 21,272,727	\$ 78,000,000	\$ 12,000,000	\$ 3,000,000	\$ 15,000,000	\$ 68,727,273	\$ 24,272,727	\$ 93,000,000
	13.23.03 Construct Shelbyville Segment Contract Unit #2		\$ 74,181,818	\$ 27,818,182	\$ 102,000,000	\$ 36,000,000	\$ 9,000,000	\$ 45,000,000	\$ 110,181,818	\$ 36,818,182	\$ 147,000,000
	13.63.01 Construct LRT Systems - Contract Unit #2		\$ 6,400,000	\$ 2,400,000	\$ 8,800,000	\$ 800,000	\$ 200,000	\$ 1,000,000	\$ 7,200,000	\$ 2,600,000	\$ 9,800,000
	13.71.11 Contaminated Soils - Contract Unit #2		\$ 1,818,182	\$ 681,818	\$ 2,500,000	\$ 800,000	\$ 200,000	\$ 1,000,000	\$ 2,618,182	\$ 881,818	\$ 3,500,000
	13.75.91 Right-of-Way Acquisition - Contract Unit #2		\$ 40,000,000	\$ 15,000,000	\$ 55,000,000	\$ 24,000,000	\$ 6,000,000	\$ 30,000,000	\$ 64,000,000	\$ 21,000,000	\$ 85,000,000
Scope											
134-00	Support Equip/Facilities - New Start - Contract Unit #3		\$ 1,890,909	\$ 709,091	\$ 2,600,000	\$ 7,200,000	\$ 1,800,000	\$ 9,000,000	\$ 9,090,909	\$ 2,509,091	\$ 11,600,000
	Activity										
	13.33.06 Construct Stationary Fare Coll Equip - Contract Unit #3		\$ 1,890,909	\$ 709,091	\$ 2,600,000	\$ 7,200,000	\$ 1,800,000	\$ 9,000,000	\$ 9,090,909	\$ 2,509,091	\$ 11,600,000
Scope											
136-00	Signals/Communication - New Start - Contract Unit #4		\$ 1,890,909	\$ 709,091	\$ 2,600,000	\$ 7,200,000	\$ 1,800,000	\$ 9,000,000	\$ 9,090,909	\$ 2,509,091	\$ 11,600,000
	Activity										
	13.62.02 Purchase Communications System - Contract Unit #4		\$ 1,890,909	\$ 709,091	\$ 2,600,000	\$ 7,200,000	\$ 1,800,000	\$ 9,000,000	\$ 9,090,909	\$ 2,509,091	\$ 11,600,000
Scope											
137-00	Other Capital Items - New Start - Contract Unit #5		\$ 88,931,818	\$ 33,068,182	\$ 122,000,000	\$ 71,200,000	\$ 17,800,000	\$ 89,000,000	\$ 160,131,818	\$ 50,868,182	\$ 211,000,000
	Activity										
	13.79.00 Project Administration - Contract Unit #5		\$ 16,790,000	\$ 6,210,000	\$ 23,000,000	\$ 17,600,000	\$ 4,400,000	\$ 22,000,000	\$ 34,390,000	\$ 10,610,000	\$ 45,000,000
	13.71.04 Construction Management - 3rd Party - Contract Unit #5		\$ 23,360,000	\$ 8,640,000	\$ 32,000,000	\$ 24,000,000	\$ 6,000,000	\$ 30,000,000	\$ 47,360,000	\$ 14,640,000	\$ 62,000,000
	13.73.00 Professional Services - Contract Unit #5		\$ 5,818,182	\$ 2,181,818	\$ 8,000,000	\$ 9,600,000	\$ 2,400,000	\$ 12,000,000	\$ 15,418,182	\$ 4,581,818	\$ 20,000,000
	13.21.04 Eng/Design - Tunnels - Contract Unit #5		\$ 10,909,091	\$ 4,090,909	\$ 15,000,000	\$ 8,000,000	\$ 2,000,000	\$ 10,000,000	\$ 18,909,091	\$ 6,090,909	\$ 25,000,000
	13.21.03 Eng/Design - Line Eq/Structures - Contract Unit #5		\$ 17,454,545	\$ 6,545,455	\$ 24,000,000	\$ 12,000,000	\$ 3,000,000	\$ 15,000,000	\$ 29,454,545	\$ 9,545,455	\$ 39,000,000
	13.7H.00 Finance Costs - Contract Unit #5		\$ 14,600,000	\$ 5,400,000	\$ 20,000,000				\$ 14,600,000	\$ 5,400,000	\$ 20,000,000
Scope											
137-01	Other Capital - New Start - Start Up Contract Unit #6		\$ 8,363,636	\$ 3,136,364	\$ 11,500,000	\$ 9,200,000	\$ 2,300,000	\$ 11,500,000	\$ 17,563,636	\$ 5,436,364	\$ 23,000,000
	Activity										
	13.71.11 Start Up Costs - Contract Unit #6		\$ 8,363,636	\$ 3,136,364	\$ 11,500,000	\$ 9,200,000	\$ 2,300,000	\$ 11,500,000	\$ 17,563,636	\$ 5,436,364	\$ 23,000,000
Scope											
137-02	Other Capital - New Start - Contingency - Contract Unit #7		\$ 47,272,727	\$ 17,727,273	\$ 65,000,000	\$ 40,000,000	\$ 10,000,000	\$ 50,000,000	\$ 87,272,727	\$ 27,727,273	\$ 115,000,000
	Activity										
	13.71.11 Other - Project Contingency - Contract Unit #7		\$ 47,272,727	\$ 17,727,273	\$ 65,000,000	\$ 40,000,000	\$ 10,000,000	\$ 50,000,000	\$ 87,272,727	\$ 27,727,273	\$ 115,000,000
Scope											
137-03	Other Capital - New Start - Preliminary Engineering					\$ 5,600,000	\$ 1,400,000	\$ 7,000,000	\$ 5,600,000	\$ 1,400,000	\$ 7,000,000
	Activity										
	13.71.01 Preliminary Engineering (Prior Grants)					\$ 5,600,000	\$ 1,400,000	\$ 7,000,000	\$ 5,600,000	\$ 1,400,000	\$ 7,000,000
Totals:			\$ 500,204,545	\$ 187,295,455	\$ 687,500,000	\$ 250,000,000	\$ 62,500,000	\$ 312,500,000	\$ 750,204,545	\$ 249,795,455	\$ 1,000,000,000

Springfield Metropolitan Transit Authority (MTA)
East Corridor LRT Project

CONTRACT UNIT	START	98	1999				2000				2001				2002				2003				2004				2005				2006				
		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1			
EAST CORRIDOR LRT PROJECT	8/1/98																																		
01- ROLLING STOCK	8/16/99																																		
02 - TRANSITWAY CONSTRUCTION	12/1/98																																		
03 - SUPPORT EQUIPMENT&	3/13/00																																		
04 - SIGNAL & COMMUNICATIONS	8/30/99																																		
05 - OTHER CAPITAL ITEMS	8/1/98																																		
06 - START UP	6/7/04																																		
07 - PROJECT CONTINGENCY	8/31/98																																		
REVENUE OPERATION DATE	12/31/05																																		

Attachment 5

Springfield Metropolitan Transit Authority (MTA)
East Corridor LRT Project

Prior Grants And Related Documents

I. Prior Grants

Project No.	Obligation Date	Federal Amount	Funding Source	Purpose
AA-90-X125	05/25/97	\$5,600,000	CMAQ	Preliminary Engineering

TOTAL \$5,600,000

II. Related Documents

1. Approval to Enter Preliminary Engineering – May 9, 1997
2. Final Environmental Impact Statement - May 21, 1998
3. Record of Decision - August 31, 1998
4. Approval to Initiate Final Design - October 26, 1998
5. Letter of No Prejudice - Final design and land acquisition - October 26, 1998

III. FFGA Grant History
(Grants under FFGA)

Project No.	Obligation Date	Funding Source	Amount
AA-03-0123		Section 5309	\$22,107,170

Attachment 6

Springfield Metropolitan Transit Authority (MTA)
East Corridor LRT Project

Schedule of Federal Funds

Section 3030(a)(xx) of the Transportation Equity Act for the 21st Century (TEA-21) authorizes FTA to award Federal capital new starts funds for final design and construction of the East Corridor Extension (“the Project”) to the Metropolitan Transit Authority’s light rail transit system in Springfield. With the transaction of this Agreement, FTA is awarding \$22,107,170 in capital new starts funds for the Project. In accordance with the Federal Transit Laws, 49 U.S.C. Chapter 53, and FTA Circular 5200.1, Full Funding Grant Agreements Guidance (July 2, 1993), by the execution of this Agreement the Government is limiting its commitment to provide new starts funding for the Project to those funds that have been or may be appropriated under TEA-21. The Government and the Grantee recognize, however, that the period of time necessary to complete the Project may extend beyond the expiration of TEA-21, as evidenced by Attachment 4 to this Agreement (Baseline Schedule).

Moreover, the Government has previously provided funds for the Project under the Congestion Mitigation and Air Quality (CMAQ) program—as authorized previously by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and currently authorized by TEA-21—and expects to award additional CMAQ funding for the project during the term of TEA-21.

Currently, the Government and the Grantee anticipate that the Federal capital new starts funds and CMAQ funds will be provided for the Project as follows:

East Corridor Light Rail Transit Project
Proposed Schedule of Federal Funds
(Based on Year of Appropriation)

FISCAL YEAR	FEDERAL		LOCAL	TOTAL
	New Starts	CMAQ		
	FFGA			
FY 00	\$22,107,170	\$5,600,000*	\$6,926,795	\$34,633,965
FY 01	50,000,000	35,000,000	28,000,000	113,000,000
FY 02	75,000,000	35,000,000	36,000,000	146,000,000
FY 03	75,000,000	35,000,000	36,000,000	146,000,000
FY 04	75,000,000	35,000,000	36,000,000	146,000,000
FY 05	75,000,000	35,000,000	36,000,000	146,000,000
FY 06	50,000,000	35,000,000	28,000,000	113,000,000
FY 07	50,000,000	34,400,000	28,000,000	112,400,000
FY 08	27,892,830		15,073,205	
TOTAL	\$500,000,000	\$250,000,000	\$250,000,000	\$1,000,000,000

* CMAQ shown in FY 00 represents a prior obligation of \$5,600,000 obligated in FY 97.

Attachment 7

Springfield Metropolitan Transit Authority (MTA)
East Corridor LRT Project

Measures to Mitigate Environmental Impacts

The mitigation measures and other project features that reduce adverse impacts, to which FTA and the grantee committed in the FEIS and environmental Record of Decision (or in the EA and Finding of No Significant Impact) are set forth in Attachment 7, "Measures to Mitigate Environmental Impacts." These mitigation measures may not be eliminated from the project except by FTA written consent following a supplemental environmental review. Following is a sample format for presenting the mitigation commitments in Attachment 7. This particular example is set up to facilitate the monitoring of the implementation of those mitigation measures during final design and construction. This sample is offered for illustrative purposes, because the specific impacts and associated mitigation will, of course, vary from one project to another. As indicated on the sample, it is the responsibility of the grantee to ensure that mitigation commitments are carried in accordance with FEIS/ROD or EA/FONSI.

Attachment 7

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
TRAFFIC					
TR 1.	<p>Provide local street improvements at three intersections to improve LOS:</p> <ul style="list-style-type: none"> • Big Gorge Rd./Big Gorge Pl.: Restripe WB approach to 2 lanes. • Waring Rd./ Adobe Falls Rd.: Restripe to 3 lanes EB and WB • Campanile Dr./ Mountain Rd.: Coordinate with SSU and College Area Redevelopment Project. 	Include in contract drawings.	MTA with coordination from City, State DOT, and SSU	Design	
TR 2.	Widen easterly EB I-8 offramp at 70th Street to two lanes to mitigate closure of westerly EB to SB offramp.	Include in contract drawings.	MTA with coordination from City of Shelbyville and State DOT	Design	
	Provide 2 travel lanes at WB Alvarado Rd. at 70th St. and eliminate free right turn from NB 70th St. to EB Alvarado Rd. Modify signalization as required.				

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	Signalize ramps at Alvarado Rd.				
PARKING					
PK 1.	Provide as per MTA/SSU MOU to mitigate loss of 87 spaces at SSU.	Include in contract drawings.	MTA with coordination from SSU	Design & Construction	
PK 2.	Replace potential loss of 20-25 parking spaces at Church of Nazarene, if required by Conditional Use Permit.	Include in contract drawings.	MTA with coordination from City of Springfield and Church of Nazarene	Design	
LAND USE - None Required					
DEMOGRAPHICS & NEIGHBORHOODS					
DN 1.	Replace the swimming pool and recreation room being taken from the Waring Road condominium complex or compensate remaining residents for loss.	Develop pool replacement and recreation room options or determine value of loss to remaining owners.	MTA	Design, ROW acquisition	
ACQUISITIONS & DISPLACEMENTS					

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation ¹	Implementation and Monitoring	Responsible Party	Timing	Status
AD 1.	Provide compensation and relocation assistance to affected residential property owners and renters and to business owners, for acquisition of properties.	Comply with the <i>Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970 and Amendments</i> and the <i>California Relocation Act</i> .	MTA	Design, ROW acquisition	
	Compensate owners for partial acquisition of parcels.				
ECONOMICS & FISCAL CONDITIONS					
EF 1.	Provide relocation assistance to displaced business owners.	See AD 1., above.	See AD 1., above.	See AD 1., above.	
PUBLIC SERVICES & UTILITIES					
PS 1.	Provide relocation assistance to Montessori preschool.	See AD 1., above.	See AD 1., above.	See AD 1., above.	
PS 2.	Incorporate drainage facilities for affected hillsides into LRT design to ensure that there is no additional burden on existing drainage facilities.	Include in contract drawings. Provide hydraulic calculations.	MTA with coordination from City, State DOT, and Flood Control agency.	Design	
PS 3.	Relocate storage building on City of Springfield Water Utilities property.	Include in contract drawings.	MTA with coordination from City.	Design	
VISUAL QUALITY & AESTHETICS					
VQ 1.	Provide fence and landscaping along north side of MTA site to screen view from Mary	Include in contract drawings and specifications.	MTA with coordination	Design	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	Fellows Ave. looking south at guideway, bridge, and parking lot.		from City of Shelbyville and neighborhood groups.		
VQ 2.	Shield light fixtures at Mary Fellows Ave. parking lot to reduce potential for light and glare.	Include in procurement specifications. Field check following installation.	MTA	Design and operation	
VQ 3.	Provide ornamental landscaping and trees to screen view of guideway from properties on Guava Avenue looking north.	Licensed landscape architect to prepare plans. Include in contract drawings and specifications.	MTA with coordination from City of Shelbyville and neighborhood groups.	Design	
VQ 4.	Provide night-time lighting under the guideway in SSU parking lots C and X.	Include in contract drawings.	MTA with coordination from SSU.	Design	
VQ 5.	Use appropriate surfaces and/or coatings at station entrances to prevent glare and on all smooth surfaces up to 10 feet in height to prevent graffiti.	Include in plans and contract specifications.	MTA	Design	
VQ 6.	Combine poles for catenaries, light fixtures, and signs whenever possible to reduce unnecessary clutter.	Include in contract drawings.	MTA	Design	
SAFETY & SECURITY					
SS 1.	Reduce the potential for accidents involving	STI and/or STC Standard	STI	Operation	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	transit vehicles by implementing standard safety procedures.	Operating Procedures Manual			
SS 2.	Relieve public concerns regarding the proximity of the guideway or Traction Power Substation by fencing the project.	Include in contract drawings.	MTA	Design	
SS 3.	Reduce the potential for EMF risks by using standard precautions and design treatments.	Include in contract drawings.	MTA	Design	
SS 4.	Reduce the potential for injury during emergency evacuations by following NFPA guidelines in design.	Include in contract drawings.	MTA	Design	
SS 5.	Reduce the potential for crime on vehicles and in stations by implementing STI and SSU security procedures and design guidelines.	Review of final design details to ensure inclusion of appropriate features. Follow STI and/or STC standard operating procedures.	TDB in cooperation with SSU.	Design and Operation	
CULTURAL RESOURCES					
CR 1.	Implement a monitoring program for excavation and fossil recovery so that paleontological resources will not be destroyed. (See also CI 13.)	Include in bid documents	MTA	Design and construction	
SECTION 4(F) - None Required					

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
AIR QUALITY - None Required					
NOISE & VIBRATION					
NV-1.	Install sound walls and/or insulation to reduce operational noise at 13 locations (5 on West Falls View, 1 at Villa Alvarado, 5 on Colony Drive (4 mobile homes and 1 apartment), and 2 on Guava Avenue). See FEIS Table 4-29 for details.	Include sound walls in contract drawings. Coordinate with property owners for insulation.	MTA	Design and construction.	
NV 2.	Locate support structures and install high resilience track fasteners and ballast mats to reduce operational vibration at 6 locations (1 at Villa Alvarado and 5 on Colony Drive [4 mobile homes and 1 apartment]). See FEIS Table 4-33 for details.	Include in contract drawings.	MTA	Design	
GEOLOGY & SEISMICITY					
GS 1.	Use suitable designs and incorporate appropriate construction techniques to prevent structural damage or failure in the event of liquefaction, slope failure, compressible soils, severe ground motion, and corrosive soils. See FEIS Section 4-11.4 for details.	Include in contract drawings.	MTA	Design and construction	
GS 2.	Perform a comprehensive geotechnical evaluation during preliminary engineering and final design to assess subsurface conditions and obtain specific data on potential geotechnical hazards and constraints.	Include geotechnical report in bid documents.	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	Provide specific recommendations pertaining to all geotechnical design considerations.				
GS 3.	Construction will meet or exceed UBC, State DOT, or AASHTO requirements as relevant.	Review contract drawings and ensure sign off by a registered California Professional Engineer. Monitor construction to ensure that specifications and drawings are complied with at all times.	MTA	Design and construction	
HAZARDOUS MATERIALS-None Required					
WATER RESOURCES					
WR 1.	Comply with the conditions of the General Industrial Storm Water Permit to mitigate runoff effects.	Monitor compliance during construction. Report periodically to RWQCB.	MTA	Design and Construction	
WR 2.	Install drainage facilities at the University and 70th Street stations and direct drainage from new impervious surfaces away from significant biological resources.	Check contract drawings.	MTA	Design and Construction	
WR 3.	Design columns at the Springfield River and improvements within University and the Alvarado channel (Alvarado Medical and 70th St. stations) to handle required capacity for expected flood conditions, and	Coordinate with USACOE, SDCFCD, and Cities of Springfield and Shelbyville. Check design plans.	MTA with coordination from flood control agencies and	Design	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	as required by USACOE and Springfield County Flood Control District.	Include hydraulic calculations in specifications.	Cities of Springfield and Shelbyville.		
WR 4.	Provide aeration basin in vicinity of 70 th Street station to mitigate for enclosure of Alvarado Channel.	Include in contract drawings.	MTA with coordination from RWQCB.	Design	
ECOSYSTEMS					
EC 1.	Revegetate manufactured slopes adjacent to LRT using native, on-site species where possible. Include Ashy spike-moss and Springfield sunflower in mix.	Include requirements in landscaping specifications.	MTA with coordination from resource agencies.	Design and construction	
EC 2.	Obtain and restore or create plant habitat mitigation sites (at locations to be determined in final design) to mitigate losses of Southern Willow Scrub (0.1 acre affected) and Southern Willow Riparian Woodland (0.5 acre affected). Mitigate temporary impacts to Southern Willow Riparian Woodland (0.26 acre) at 2.0:1 ratio (0.52 acre). Mitigate permanent impacts (0.24 acre) at 3:1 ratio (0.72 acre). Ratios of both to be reduced if pre-construction replacement is undertaken.	Include requirements in landscaping specifications. Monitor planted areas for five years or until sufficient coverage is achieved (whichever is longer).	MTA with coordination from resource agencies.	Design, construction, and operation	
EC 2 cont.	Provide mitigation for affected wetlands (0.6 acre) in accordance with <i>Springfield</i>				

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	<i>Wetlands Management Plan.</i>				
EC 3.	Comply with USACOE and SDFG permit conditions to mitigate disturbances to jurisdictional waters. Wetland impacts will be mitigated under EC2.	Obtain permit prior to construction of actual affected areas. Monitor construction to maintain compliance with permit conditions.	MTA with coordination from resource agencies.	Design and construction	
EC 4.	Replace Least Bell's Vireo habitat and take the actions identified in Attachment A in consultation with USFWS.	See EC 2. above.	See EC 2. above.	See EC 2. above.	
EC 5.	Comply with conditions of the Section 7 agreement regarding disturbance to potential vireo habitat during the construction process	Incorporate restrictions and conditions in construction specifications. Conduct field monitoring in accordance with agreement conditions.	MTA with coordination from resource agencies.	Construction	
EC 6.	Contribute \$50,000 to the Springfield River endowment fund or a brown-headed cowbird trapping program.	Provide evidence of contribution.	MTA	Pre-operation	
EC 7.	Mitigate loss of coastal sage scrub habitat through one of three methods: (1) participate in the City of Springfield MSCP program, (2) pursue a Section 10 permit from the USFWS, or (3) use the ESA Section 7 consultation procedure as part of the 404	Obtain necessary permit or documentation prior to construction of actual affected areas.	MTA with coordination from resource agencies.	Operation	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	process.				
EC 8.	If a fire buffer zone is required and would further affect native vegetation, implement a fuel modification plan that uses native plants and selective thinning of native vegetation.	Include in landscaping specifications	MTA with coordination from resource and fire agencies.	Design and construction	
ENERGY – None Required					
CONSTRUCTION					
CI 1.	Prepare and implement traffic management plan(s) to mitigate temporary lane closures and congestion, both on local roads and I-8. Include coordination with Alvarado Medical Center, SSU, SSU Foundation, State DOT, emergency response personnel, and the community. Plan should fully outline contractor requirements to maintain traffic operations, including staging, signing, marking, advisory notices, detours, and time-of-work restrictions. Mitigation measures will also be documented.	Include in contract drawings and specifications.	MTA with State DOT and Cities of Shelbyville and Springfield coordination	Design and construction	
CI 2.	Provide replacement parking where possible for compensation to SSU (per the MOU) and DZ Akins.	Include in contract specifications	MTA in cooperation with SSU and City of Shelbyville.	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
CI 3.	Implement a public information program to increase community awareness and minimize neighborhood disruption.	Document public outreach efforts and report to MTD Board quarterly	MTA	Design and construction	
CI 4.	Compensate property owners for construction easements.	Follow MTA Real Estate Acquisition procedures.	MTA	Design and construction	
CI 5.	Implement a business information program and access management plan to minimize business disruption. (See DEIR Section 4-17.4.3 for details.)	Document and report quarterly to MTD Board	MTA	Design and construction	
CI 6.	Implement an emergency response coordination program and task force to minimize effects of construction on response time and community facilities and services.	Document and report quarterly to MTD Board	MTA with coordination from public agencies and identified interested parties.	Design and construction	
CI 7.	Reduce construction noise and dust by adhering to local and state codes and ordinances. Use fencing and dust suppression techniques as necessary.	Include in contract specifications. Monitor during construction and penalize contractor for violations.	MTA with coordination from SDAPCD.	Design and construction	
CI 8.	Minimize utility disruptions by careful	Document utility locations on	MTA		

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	scheduling, prior notification to affected properties, consultation with utility agencies during final design, and notification prior to groundbreaking.	contract drawings and coordinate with utility providers during final design.		Design and construction	
CI 9.	Replace mature vegetation removed during construction on hillsides south of I-8 to provide erosion control and visual cover. Use drought resistant plant materials that will mature in 3-5 years. Maintain, monitor, and manage landscaping until established and reasonable coverage is reached. Design should be prepared by a landscape architect.	Include in landscaping specifications and drawings. Monitor and report to Board until reasonable coverage is achieved.	MTA	Design and operation	
CI 10.	Reduce erosion by using proper grading and sloping, including contours to follow the natural hillside, stepped cut slopes, and other techniques.	Check grading plans. Monitor during construction.	MTA	Design and construction	
CI 11.	Reduce risks of accidents, vandalism, and theft by providing site fencing and security.	Include on contract drawings and specifications. Check sites periodically during construction.	MTA	Design and construction	
CI 12.	Reduce potential vibration impacts to historic structures at SSU by specifying vibration limits in construction documents. Mitigate potential for settlement via specifications to address: (1) settlement criteria, (2) controls for operation of tunnel	Include in contract specifications. Monitor during construction.	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	boring machine, (3) surface monitoring program, and (4) soil stabilization measures. Monitor structures before and during construction.				
CI 13.	Minimize adverse impacts to (presently) unknown archaeologic or paleontologic sites by preparing and instituting a monitoring and contingency program during excavation. Program will include techniques for avoidance, data recovery, specimen preparation, and curation. Contractor/monitor interaction and responsibilities should be detailed and a summary report prepared following excavation.	Include plan in bid package. Monitor during construction.	MTA	Design and construction	
CI 14.	Reduce emissions of NOx, CO, and PM10 to SDAPCD standards by specifying equipment characteristics and construction practices in contract documents.	Include in contract specifications. Field check construction site equipment periodically.	MTA	Design and construction	
CI 15.	Reduce construction noise impacts to residents by tailoring construction specifications to specific areas and offering alternate accommodations if necessary. Specific mitigation measures could include constructing temporary sound walls (3/4-inch or thicker plywood or vinyl curtains);	Check final design plans and contract drawings and specifications. Field check construction sites and penalize contractor for violations.	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	constructing permanent sound walls prior to project construction; including property line noise limits in the construction specifications; monitoring site noise and penalizing the contractor for violations; using equipment meeting specified noise criteria; avoiding impact pile driving where possible, or, if impact pile driving cannot be avoided, offering overnight living accommodations to affected residents.				
CI 16.	Reduce tunnel construction vibration impacts by specifying a maximum ppv limit of 0.2 inches per second in contract documents (unless other studies recommend a higher limit) and preparing a contingency plan should pre-splitting be necessary.	Include in contract specifications. Field check during construction.	MTA	Design and construction	
CI 17.	Reduce the potential for hazardous waste to migrate as a result of construction, or soil or water contamination to occur by preparing a Phase II Site Assessment and implementing remediation measures identified prior to and/or during construction in affected areas.	Include results of site assessment in bid package.	MTA	Design and construction	
CI 18.	Prepare and implement an emergency response plan to address encountering previously undetected hazardous materials at construction sites and to address procedures	Include plan in contract package. Field check construction site procedures.	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
	in the event of a release of such materials.			tion	
CI 19.	Contact local environmental regulatory and emergency response agencies, in the event that previously undetected hazardous materials are encountered during site excavation.	Include in contract package.	MTA	Design and Construction	
CI 20.	Characterize and dispose of fill and debris containing hazardous materials.	Include in contract package.	MTA	Design and Construction	
CI 21.	Regularly maintain all heavy equipment to minimize leakage of fluids.	Check maintenance logs at each construction site periodically.	MTA	Construction	
CI 22.	Store all paints and solvents in accordance with local and state codes and regulations.	Check construction sites periodically.	MTA	Construction	
CI 23.	Obtain and comply with a General Construction Storm Water Permit from the RWQCB. This will include completion of a Notice of Intent, Storm Water Pollution Prevention Plan, and Monitoring Program.	Include in contract package	MTA	Design and construction	
CI 24.	Prevent sediment-laden runoff from reaching surface water systems by following an appropriate grading plan.	Check grading plan in contract drawings. Field check construction to ensure that plan is followed.	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
CI 25.	Obtain written waiver of 401 Water Quality certification requirements from the RWQCB. Provide waiver to obtain Section 404 permit from the USACOE.	Include in 404 permit application and in bid package.	MTA	Design	
CI 26.	Perform dewatering activities in accordance with section 4-16.13.4 of the FEIS.	Check construction site periodically.	MTA in association with approval agencies and Cities of Springfield and Shelbyville.	Construction Obtain permits prior to construction in affected areas.	
CI 27.	Reduce dust and erosion impacts on fauna with Best Management Practices and erosion control techniques.	Include in contract specifications. Check construction site periodically.	MTA	Design and construction	
CI 28.	Reduce noise impacts on fauna by using equipment meeting specified noise limits and other noise control measures. Monitor noise levels.	Include in contract specifications. Check construction site periodically.	MTA	Design and construction	
CI 29.	Ensure that no sensitive birds are in the area to be cleared during clearing.	Schedule vegetation clearing to avoid nesting season.	MTA and USFWS	Construction	
CI 30.	Institute erosion control and sedimentation basin features and long term replanting and monitoring on upland slopes.	Include in contract specifications. Check construction site	MTA	Design and construction	

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
		periodically.		construction	
ENVIRONMENTAL JUSTICE (Executive Order 12898) - None required					
PROTECTION OF CHILDREN (Executive Order 13045)- None required					
CH 1.	Maintain standard safety precautions throughout construction period. Provide special attention and site-specific treatment at SSU Children's Center and Montessori Preschool (if retained).	Include in contract specifications. Conduct periodic field monitoring to verify compliance.	MTA	Design and construction	
CUMULATIVE IMPACTS- None required					
Notes: ¹ See Final Environmental Impact Statement for complete descriptions of impacts and proposed mitigation measures.					

SPRINGFIELD METROPOLITAN TRANSIT AUTHORITY (MTA) EAST CORRIDOR LRT PROJECT MEASURES TO MITIGATE ENVIRONMENTAL IMPACTS					
Mit. Number	Impact/Mitigation¹	Implementation and Monitoring	Responsible Party	Timing	Status
<p>Acronyms: AASHTO - American Association of State Highway Transportation Officials SDFG - State Department of Fish and Game CO - Carbon Monoxide DEIS - Draft Environmental Impact Statement EMF - Electromagnetic Force ESA - Endangered Species Act LOS - Level of Service LRT - Light Rail Transit MOU - Memorandum of Understanding MSCP - Multiple Species Conservation Plan MTA - Metropolitan Transit Authority NOx - Nitrogen Oxides NFPA - National Fire Protection Association</p> <p>PM10 - Particulate Matter less than 10 microns in size ppv - Peak Particle Velocity ROW - Right-of-way RWQCB - Regional Water Quality Control Board SDAPCD - Springfield Air Pollution Control District SDCFCD - Springfield County Flood Control District SSU - Springfield State University STI/STC - Springfield Transit, Inc./Springfield Transit Corp. SFR - Single Family Residence TPSS - Traction Power Substation UBC - Uniform Building Code USACOE - U.S. Army Corps of Engineers USFWS - U.S. Fish and Wildlife Service</p>					

Attachment 8

Springfield Metropolitan Transit Authority (MTA) East Corridor LRT Project

Commitment to Carry Out a “Before and After” Study

In accordance with the Before and After Study Plan approved by FTA, the Springfield Metropolitan Transit Authority (MTA) will assemble information and conduct analyses to identify the actual performance of the Project in terms of its costs and impacts, evaluate the reliability of technical methods used during the planning and development of the Project, and identify potentially useful improvements to those methods. Specifically:

1. Required Information

MTA will assemble information on five characteristics of the Project and its associated transit services: a) *project scope*: the physical components of the Project, including environmental mitigation; b) *service levels*: the operating characteristics of the guideway, feeder bus services, and other bus services in the corridor; c) *capital costs*: total costs of construction, vehicles, engineering, management, testing, and other capital expenses; d) *operation and maintenance costs*: incremental operating/maintenance costs of the Project and the transit system; and e) *ridership patterns*: incremental ridership, origin/destination patterns of transit riders on the Project and in the corridor, and incremental farebox revenues for the transit system.

2. Milestones

MTA will assemble those data items that are available at three key milestones in the development and operation of the Project: a) *predictions*: the predictions developed for the five characteristics of the Project at the conclusion of alternatives analysis, at the conclusion of preliminary engineering, and any changes made to those estimates during final design; b) *prior conditions*: transit service levels, operating/maintenance costs, and ridership/farebox-revenues that obtain immediately prior to any significant changes in transit service levels caused by either the construction or opening of the Project; and c) *after conditions*: the actual outcomes for the five characteristics of the Project two years after the opening of the Project to revenue service and associated adjustments to other transit services in the corridor.

MTA will assemble the data and perform the analyses in accordance with its Before and After Study Plan developed by the Grantee during Final Design of the Project. MTA will maintain communication with FTA and its contractors on progress in implementing the Plan and provide opportunities for early review and comment on draft products. MTA will complete the data assembly and analysis on the schedule established in the Plan.

APPENDIX C

FFGA APPLICATION DOCUMENT CHECKLIST (SAMPLE)

DOCUMENT	TARGET DATE	STATUS/COMMENTS
Annual Certifications/Assurances (electronic)		
Grant Application (electronic and hard copy)		
Federal STIP Approval		
Record of Decision/FONSI		
Civil Rights Program Review		
Project Management Plan		
Quality Management Plan		
Safety and Security Plan		
Before and After Study Plan		
Rail Fleet Management Plan		
Bus Fleet Management Plan		
Real Estate Acquisition Plan		
Interagency and RR/Joint Use Corridor Agreements		
Value Engineering		
PMOC Technical Review Spot Report		
PMOC Cost-To-Complete Review Spot Report		
Financing Plan		
Financial Capacity Review		
Department of Labor Certification (5333b)		
Full Funding Grant Agreement text		
Attachment 1- Scope of The Project		
Attachment 1A- Color Map		
Attachment 2- Project Description		
Attachment 3- Baseline Cost Estimate		
Attachment 3A- Project Budget		
Attachment 4- Baseline Schedule		
Attachment 5- Prior Grants and Related Documents		
Attachment 6- Schedule of Federal Funds For The Project		
Attachment 7- Measures to Mitigate Environmental Impacts		
Attachment 8- New Starts "Before And After" Study		
Other		

APPENDIX D

APPLICATION OF FFGA COST AND AWARD TERMINOLOGY

Assume that the costs of a Project for which an FFGA has been requested have been estimated at \$335 million. Assume that \$25 million of these costs are ineligible for FTA funding, perhaps, for example, because road repair is required and FTA is prohibited by statute from providing financial assistance for general-purpose road construction. Assume further that the Grantee will receive \$10 million in revenue from the sale of Grantee-owned assets, and it is determined that this \$10 million in revenue is available to the Grantee to cover certain costs of the Project.

Thus, we have the following figures:

Estimated Total Project Cost	\$335 million
Less ineligible items	\$ 25 million
Baseline Cost Estimate	\$310 million
Less costs that can be financed from revenue	\$ 10 million
ESTIMATED NET PROJECT COST	\$300 MILLION

Assume that on the date of the FFGA award, FTA obligated \$10 million in new starts funds toward the project.

Assume that \$5 million of CMAQ funds had been awarded earlier toward the project and those funds were included in the FFGA as part of the Project Budget.

Assume the array of costs, sources of funds, and matching shares is as follows:

Source of Federal Funds	Costs Attributed to Source of Funds (millions)	Federal/local Matching Ratio within Source	Federal Dollars (millions)	Local Dollars (millions)
5309 New Starts	\$100 M	60/40	\$60 M	\$40 M
CMAQ	\$100 M	80/20	\$80 M	\$20 M
5307	\$100 M	80/20	\$80 M	\$20 M
Totals	\$300 M		\$220 M	\$80 M

Then the following list demonstrates the cost and award terms that would be applied to the FFGA:

Estimated Net Project Cost: \$300 million

Maximum Federal New Starts Financial Contribution: \$60 million

Estimated Contributions from Other Federal Sources: \$80 million + \$80 million = \$160 million

Maximum New Starts Amount Awarded prior to this amendment: \$0

Maximum New Starts Amount Awarded, with this amendment: \$10 million

Maximum New Starts Amount Awarded Total, including this amendment: \$10 million

Maximum FTA Amount Awarded, prior to this amendment: \$5 million (CMAQ)

Maximum FTA Amount Awarded, with this amendment: \$10 million (new starts funds)

Maximum FTA Amount Awarded Total, including this amendment: \$15 million
(\$10 million + \$5 million)

Maximum Percentage of New Starts Participation: \$60 million/\$100 million = 60%

Maximum Percentages of FTA participation:

CMAQ: \$80 million/\$100 million = 80%

5307: \$80 million/\$100 million = 80%

Anticipated Maximum FTA Funds: \$60 million (new starts) + \$80 million (CMAQ) +
\$80 million (5307) = \$220 million

New Starts Share of Net Project Cost: \$60 million/\$300 million = 20 %

Overall Federal Share of Net Project Cost = \$220 million/\$300 million = 73.3 %